Remarks
ON
A COMMUNICATION BETWEEN THE TWO VENTRICLES OF THE HEART OCCUPYING AN UNUSUAL SITUATION.

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THE usual situation where one meets with a communication between the two ventricles of the heart is that occupied in the normal condition by the pars membranacea septi. The specimen I desire to put on record is one of that small class in which the communication is between the conus arteriosus or infundibular part of the right ventricle on the one hand and the aortic vestibule on the other.

The patient, a man aged 30 years, was under the care of Sir Clifford Allbutt in the General Infirmary at Leeds, and died there in April, 1879. The clinical notes of the case cannot be traced, but the post-mortem examination was made by the late Dr. Jacob, who was then the house physician, and his notes state that the heart was enlarged and weighed 19½ oz. He also mentioned the unusual position of the aperture. When, some 12 years ago, I was making a systematic examination of the section in our museum dealing with diseases of the heart, I discovered that this specimen had not been put on record in any of the journals. I therefore got permission from Dr. Allbutt, as he then was, to show the specimen at the Anatomical Society of Great Britain and Ireland and to publish a description of it. At the meeting of the society which was held in Edinburgh in 1907 I gave an account of the specimen and discussed its meaning, giving the explanation which I now put on record.

DESCRIPTION OF SPECIMEN.

In the preparation of the specimen for display in the museum the outer part of each ventricle and auricle has been removed. One can see, however, that there must have been considerable hypertrophy of the walls of all the chambers. The remains of the mitral and tricuspid valves are normal; there is a valvular patency of the foramen ovale.

The long dimension of the abnormal aperture in the ventricular septum would, in the natural position of the heart, be almost vertical. As seen from the left side (Fig. 1) it is situated immediately below and in front of the anterior segment of the aortic valve,[1] with the middle three-fifths of which its longer dimension is co-extensive. It measures three-quarters of an inch in length by one-fifth of an inch in width. Its anterior and lower boundary is rounded and concave and is formed by the free margin of the thick fleshy infundibular part of the septum of the ventricles. The endocardium lining this margin, and for some distance below the aperture on each aspect of the septum, is thickened and opaque. On the left side especially, the membrane is particularly thick and fibrous and this thickening ends below by a singularly sharp and abrupt edge. On the free margin of the septum there are also some vegetations indicative of recent endocarditis. The aperture is bounded above and behind by the anterior aortic segment.

As seen from the right ventricle (Fig. 2) the aperture opens into the conus or infundibular part of that cavity. Here it is bounded below and in front by the concave margin of the septum already mentioned; above and behind it is bounded by the anterior segment of the aortic valve, which, in consequence of the deficiency in the septum, is visible from the right ventricle. Not only is this segment of the aortic valve visible from the right ventricle, but it projects into that chamber forming an aneurysmal dilatation of about the size of a small hazel nut, which separates the aperture from the antero-right pulmonary segment. The portion of the valve entering into this dilatation is thinned out and is much less substantial than the rest of the segment. At the summit of the dilatation there are two apertures about a fifth and a sixth of an inch respectively in diameter. These have projecting margins fringed with recent vegetations.

There is some general thickening of the aortic valve segments; the convex aspect of the anterior segment is roughened by the presence of vegetations. The portions of the convex aspects of the postero-right and postero-left segments which overhang the aperture are also slightly coated with vegetations. The posterior segment of the pulmonary valve which bounds the aperture above and in front is much thickened and coated with vegetations on both its convex and concave aspects. It is clear that during the diastole of the ventricles there must have been a stream of blood impinging on this part of the valve through the two apertures in the aneurysmal dilatation of the aortic segment. The portion of the antero-right pulmonary flap which is left is normal.

The deficiency in the septum is separated from the pars membranacea by a distance of three-quarters of an inch on the right side and by a distance of half an inch on the left side, the septum between being altogether fleshy. The pars membranacea septi is of small extent; it does not reach so far forward as is usual, and, as is indicated in the sketch (Fig. 1), it falls short of the junction of the anterior and postero-right segments of the aortic valve.

NATURE OF THE ANOMALY.

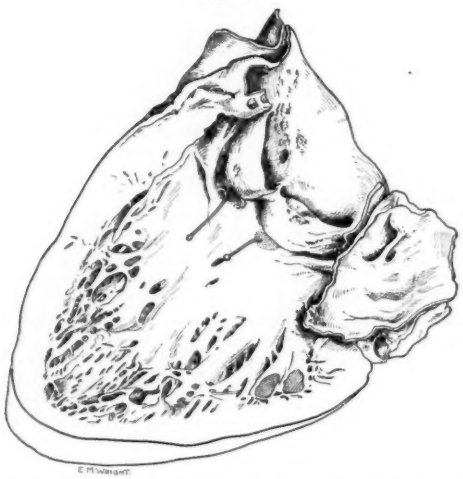
At the time I was first seeking an explanation of this particular form of deficiency of the septum of the ventricles I entertained the commonly accepted view that the main stems of the aorta and pulmonary artery were formed from the bulbus arteriosus or bulbus cordis by the division of that tube into two, and that the septum formed in the process of this division extended down into the common ventricle, where it was met by the upward-growing septum which effects the division of that chamber. I therefore saw in the anomaly a failure of fusion between the interventricular and interbulbar septa. I was soon led to modify this view by the study of a paper by Professor Arthur Keith on Malformations of the Bulbus Cordis which appeared in the Quatercentenary Publications of the University of Aberdeen. Partly as the result of his own investigations in comparative anatomy and partly from a study of the embryological work of Greil, Keith was able to point out that the fate of the bulbus cordis is different from that mentioned above. By far the greater part of the bulbus is developed into the conus

[1] The references in the text to the different semilunar segments will be clearer if read in connexion with Fig. 3.

arteriosus or infundibular part of the right ventricle, a very small portion of limited vertical extent being probably represented by the extreme upper part of the left ventricle just at its opening into the aorta. The aorta and pulmonary artery are not therefore formed from the bulbus cordis at all, but result from division of the common aortic stem. In bringing the specimen before the Anatomical Society in 1907 I interpreted the anomaly in the light of these newer views. The aperture became in my opinion "interbulbar" and was due to an imperfect formation of the septum which divides that part of the heart.

In some of his previous writings Keith had described two bands which are visible on the

FIG. 1.



View from left side. Aperture in septum shown by bent pointer passed through it. Another pointer passes through the pars membranacea septi at the stippled area.

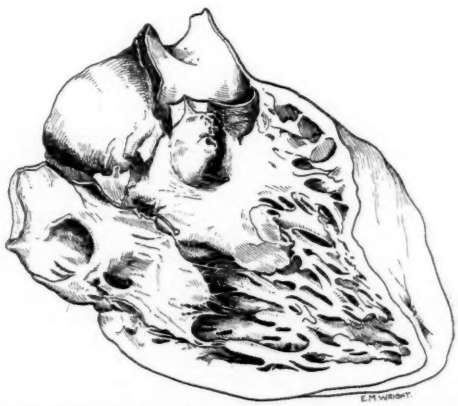
posterior wall of the conus of the right ventricle when that cavity is opened from the front. These he calls respectively the reptilian and the mammalian band. The former descends towards the apex along the ventricular septum and is called the left infundibular or apical band; the latter, which he terms the right infundibular or lateral band, passes outwards on the lateral wall of the right ventricle towards the margo acutus. These two bands, as he points out, meet on a raphé which is sometimes quite distinct, and which extends from the commissure of the two septal pulmonary segments above to the pars membranacea septi below. This raphé indicates the position of the two ingrowing processes which form the septum of the bulbus cordis. It is in the line of this raphé that deficiencies in the bulbar septum are met with, and in the specimen I describe it will be seen that the long axis of the aperture coincides with its upper half (Fig. 2).

REFERENCES TO SIMILAR CASES.

In the article on Congenital Malformations of the Heart by Laurence Humphry in Allbutt's "System of Medicine" I found references to five cases which appeared to be of the same nature as the specimen I have described. Two of these cases were mentioned in Peacock's work published in 1866 (second edition); Rokitanski was credited with two cases; and a reference was made to the case recorded by Dr. Sidney Coupland in 1879, an undoubted example of the unusual defect I have described. The two cases mentioned by Peacock were said to be in the Museum of St. Thomas's Hospital, but there was some ambiguity in the references he gave. Coupland also in commenting on his own specimen mentioned these two cases recorded by Peacock, but I gathered from the context that he had not inspected them himself.

As I knew that Professor Keith had about that time (1905) been making a very full examination of all the malformed hearts in the London museums I wrote to him on the matter, calling attention to the ambiguity of Peacock's references, and asking if he knew the specimens. In his reply Professor Keith was very careful to lay down the criteria which should guide us in determining the admission of specimens to the class of that described by Coupland which he regarded as essentially the same as that on which I was working. It was not enough that the aperture as seen from the left side of the heart should be in the same situation, but when inspected from the right side it must open into the infundibular part of the right ventricle, and must not be separated from the pulmonary segments by an area of cardiac tissue which would indicate the completion of the septum of the bulb. In regard to the reputed cases at the Museum of St. Thomas's Hospital he wrote: "There is no record of this type of specimen in my notes of the abnormal hearts at St. Thomas's Hospital; either Peacock was mistaken, or they have disappeared, as they are not now placed with the specimens on the shelves." In Peacock's work it is stated that the specimens formed a part of Sir Astley Cooper's museum, and that they were described by Dr. J. R. Farre. In addition to other abnormalities they are described by Peacock as presenting "a deficiency in the septum, interposed between the left and the infundibular portion

FIG. 2.



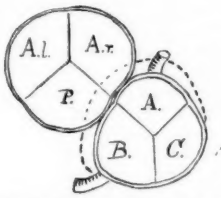
View from right side. The other ends of the two pointers shown in Fig. 1 are seen. The aneurysmal bulging of the anterior aortic segment is seen with the two apertures on its summit. The posterior pulmonary segment is seen to be thickened. A small part of the antero-right segment is preserved. The whole of the antero-left has been taken away.

of the right ventricle, immediately below the origin of the pulmonary artery." I have referred to the original description by Farre. The specimens are described under the heading of "Ostium Arteriæ Pulmonalis Communicating with Both Ventricles." They are probably both examples of the deficiency described by Coupland and myself; further than

this I cannot go, for though the description is supplemented by plates, these do not supply all the data on which to base a certain opinion.

Of the cases recorded by Rokitanski Keith accepted one (Case No. 20—that of a boy three years of age), but he rejected the other (Case No. 19), as there was clear evidence that the interbulbar septum was complete. From his notes on the specimens in the various London museums he was able to give me the following references to cases

FIG. 3.



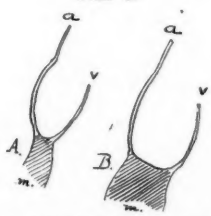
A, Anterior aortic segment. B, Postero-left aortic segment. C, Postero-right or non-coronary segment. P, Posterior pulmonary segment. A.-r., Antero-right pulmonary segment. A.-l., Antero-left pulmonary segment. A, B, P, and A.-r., constitute the four *septal* segments of Keith. The interrupted line shows the extent to which the aortic root is embraced by the muscle of the ventricles.

which appeared to him to conform to the type of that at which I was working. One of these, in the Museum of St. George's Hospital, was "evidently described by Rolleston in the Transactions of the Pathological Society." The patient was a boy aged 11 years. The opening into the right ventricle was three-eighths of an inch below the pulmonary valve and "just above the origin of the posterior or fixed, and of the anterior cusps of the tricuspid valve." The second was in Guy's Hospital Museum (No. 2309, the patient a female aged 19). The third was in the Museum of the Royal College of Surgeons of England (No. 580).

THE CONDITION OF THE ANTERIOR AORTIC SEGMENT.

The aneurysmal dilatation of the anterior segment of the aortic valve and its projection into the right ventricle, which I have mentioned, was a striking feature of the specimen. This condition of the valve is mentioned by Coupland as having been present in his case also, but the projection

FIG. 4.



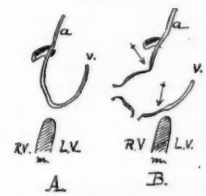
Showing the usual relationship of the muscle of the ventricle to the aortic valve (A) and the unusual relationship mentioned in the text (B). Aortic wall, valve segment, and ventricular muscle indicated respectively by the letters *a*, *v*, and *m*.

was much less and the valve segment was entire. To understand the condition one must study the relationship of the root of the aorta to the musculature of the heart, and especially to that of the ventricles. From a series of dissections I made to satisfy myself as to this, I found that the root of the aorta is embraced by ventricular muscle on its anterior and lateral aspects, and that this muscular investment extends backwards on the right side as far as the junction of the anterior one-third with the posterior two-thirds of the right or non-coronary cusp, and on the left side as far as the middle of the postero-left cusp. (Fig. 3.) The whole of the aorta opposite the anterior cusp is closely embraced by ventricular muscle.

The exact relationship of the ventricular muscle to the aorta and to its valve segments varies in another respect. The usual relationship opposite the anterior segment is that shown in the diagram. (Fig. 4, A.) Some ten years ago I put in the anatomical museum a specimen in which the condition was as shown in Fig. 4, B. The valve segment and the coat of the aorta were apparently completely separated from one another; both could be seen to end rather abruptly except for a thin layer of endarterium which preserved their continuity and through which the muscle of the ventricle could be readily seen.

Now in the specimen on which I am commenting there was a complete absence of any support to the aorta and valve corresponding to the greater part of the anterior segment. If we conceive the condition resulting from the failure in the complete formation of the bulb septum to be represented by Fig. 5, A we can readily understand that the condition shown in Fig. 5, B might be brought about by the diastolic aortic pressure. There is a slight bulging outwards of the part of the aorta entering

FIG. 5.



The lettering *a*, *v*, and *m*, as in the former figure. Shows that the infundibular part of the right ventricle is not cut off from the aortic vestibule of the left ventricle. A shows the congenital defect. B shows the bulging of the portion of the segment which faces towards the right ventricle. The beginning of the bulging is shown by the two arrows.

into the formation of the sinus of Valsalva, but the main part of the projection is formed by the thinned-out tissues of the valve segment itself, and this is precisely limited to where the ventricular muscle is wanting—namely, opposite its middle three-fifths. From an examination of the specimen I should think that during the early phase of diastole of the ventricle the aperture of communication would be closed by the apposition to its concave margin of the anterior aortic segment at the junction of the greatly thinned-out portion with the rest of the flap, which in this way would be assisted in supporting the diastolic aortic pressure. It will be seen that it is only that part of the segment which is directed to the cavity of the right ventricle which has become stretched, and this raises some further considerations.

CONCLUSION.

The amount of support which the ventricular muscle gives to the semilunar valves has been discussed by the late Dr. G. A. Gibson and by others. Dr. Harry Campbell has speculated on the conditions whereby it appears to be the case that the delicate tissue of the aortic valves is able to

support the diastolic pressure of the blood during the whole of a long and active life without giving way, and he concludes that the valves must get support from the part of the ventricular muscle which surrounds their bases remaining in contraction until the pressure in the ventricle has been raised by the entry of blood from the auricle on the relaxation of the general mass of the ventricular musculature. The work of Stewart would appear to support this view, and in the Schorstein lecture, which I had the honour to deliver at the London Hospital in 1912, I mentioned a clinical observation which seemed to point in the same direction. Those portions of the segment, therefore, which were directed respectively to the right and to the left ventricle would be assisted by the conditions, whatever they may be, which enable the delicate tissues of the pulmonary and aortic semilunar valves to perform a task which, without such help, would be clearly impossible. The resources of the left ventricle in this respect are presumably much greater than those of the right, and so it is natural that the portion of the valve which presented to the right ventricle should have been the part to suffer.

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SOME CONDITIONS THAT SIMULATE CHRONIC APPENDICITIS.[1]

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I HAVE chosen as my subject some of the conditions that may simulate chronic appendicitis, because in the latter part of last year a distinguished London physician brought a charge of uncritical and unscientific diagnosis against surgeons in connexion with appendicitis, and crystallised it into the taunt, "the craze for appendicectomy." I realise the very grave measure of justice in that charge. Since appendicitis became not only common but fashionable very many appendices have been unnecessarily removed in the absence of any real evidence that they were the cause of symptoms and without any relief to the patients' sufferings, and this is a state of affairs that challenges us to approach the diagnosis of appendicitis in a critical attitude of mind.

It is in the diagnosis of *chronic* appendicitis that mistakes are most often made, and I propose to limit my remarks to some of the conditions simulating that variety of chronic appendicitis in which there have never been any severe acute attacks—a form of the disease that is characterised by chronic pain and some tenderness in the right iliac fossa, accompanied as a rule by constipation. I do not propose to consider those more distant imitators and associates of chronic appendicitis, gastric or duodenal ulcer and gall-stones; nor must I stay to discuss lesions of the right kidney and ureter, with which at times chronic appendicitis may be confused. I propose only to deal with certain structures in the more immediate neighbourhood of the appendix, and first I have to mention Lane's ileal band and Jackson's pericolic membrane.

Lane and his followers hold that the symptoms we are considering, as well as an enormous number of other symptoms, are often due to an intestinal stasis or chronic obstruction, which is caused by an abnormal band of adhesions that we sometimes find attached to the ileum some three inches above the ileocæcal valve. Normally the lower ileum rides freely on its mesentery right down to its junction with the cæcum. Lane's ileal band, when present, is a fold of peritoneum on the left or inferior side of the ileum (see illustration), which tethers the gut down to

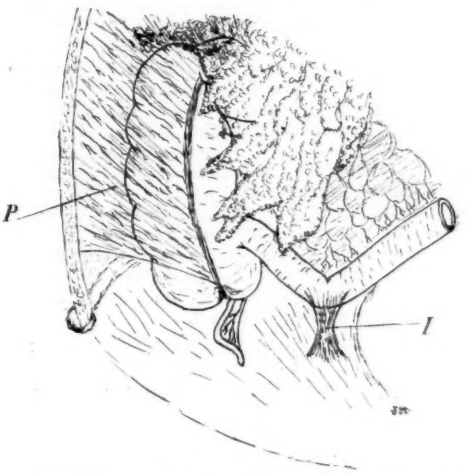

Diagram showing Jackson's pericolic membrane (*P*) and Lane's ileal band (*I*).

the parietal peritoneum over the psoas muscle near the pelvic brim. It is said by Lane to be acquired as the result of a tendency to enteroptosis, and to cause a kink of the ileum and chronic obstruction to its contents. Others have considered that it is an inflammatory band. Both these views of its causation, however, have been severely criticised, notably by Gray and Anderson in this country,[2] and Flint in America,[3] who drew attention to the frequent occurrence of the ileal band in the full-time fœtus, and demonstrated its congenital origin. I am able from my own embryological and clinical observations to confirm the congenital origin of the band. It is the same structure as the genito-mesenteric fold of Douglas Reid, and is a peritoneal fold drawn down from the left side of the lower part of the mesentery by the testis or ovary in its descent. Some trace of it can be made out in almost any fœtus beyond the fifth month, though it is only fully developed in a small percentage of cases. I

[1] An address delivered before the Lancashire and Cheshire Branch of the British Medical Association.

[2] THE LANCET, May 10th, 1913, p. 1300.
[3] Johns Hopkins Hospital Bulletin, October, 1912.

do not believe, however, that this congenital fold, unless secondarily thickened and contracted by inflammation of the appendix, which is occasionally fused with it from before birth, ever gives rise to the symptoms that have been ascribed to it, or indeed to any symptoms at all. I have made it a rule for nearly two years to look for it where feasible in every exploratory laparotomy, and have found a well-marked ileal band in some 10 per cent. of patients of all ages. In no case did I find any distension or hypertrophy of the gut above it as compared with the gut below, nor any definite narrowing of the lumen, nor were the clinical histories or the radiographic findings suggestive of chronic obstruction. Further, in the fibrous form of tuberculous peritonitis one is often struck by the fact that the small intestine can move its fluid contents along without apparent difficulty, in spite of kinks and adhesions that look as though they ought surely to have caused complete obstruction—kinks and adhesions compared with which this congenital anomaly of the lower ileum is insignificant. On all these grounds I feel bound to express my belief that Lane's ileal band, apart from inflammatory changes that may occur in it accidentally, is of little or no importance in the causation of disease, and that the many ingenious operations devised for dealing with it are the outcome of misdirected enthusiasm.

Jackson's pericolic membrane, on the other hand, is a structure which may undoubtedly give rise to symptoms simulating chronic appendicitis, though I hold that it does so less commonly than many writers on the subject would have us suppose. Let me first explain briefly what this interesting peritoneal membrane is. In its fullest development it is a delicate vascular sheet of peritoneum which is occasionally met with, stretching from the parietal peritoneum in the back of the right loin, across the groove or fossa on the outer side of the ascending colon, to fuse with the anterior longitudinal tænia on the cæcum and ascending colon. (See illustration.) It is not an acquired or inflammatory adhesion, as many have maintained, but is of congenital origin, and represents, as I have recently shown,[4] a delay in the process of development, or reversion to a primitive type, comparable with such deformities as hare-lip or imperforate anus. At an early stage of intra-uterine life, after rotation of the midgut loop, the great omentum extends over the cæcum and proximal colon to the right, and fusing with the anterior longitudinal band or tænia of the colon on the one hand, and the parietal peritoneum of the right flank on the other, becomes the earliest means by which the colon is fixed back into the right loin. Before birth, as a rule, this right process of the omentum almost completely disappears, though a trace of it can always be seen in the living body, but should the proximal colon be unduly mobile from failure of its primitive mesocolon to fuse, the original extent of the omentum may persist as Jackson's pericolic membrane.

In the greater number of these cases the symptoms are due, I believe, not to the pericolic membrane, but to the abnormal mobility of the cæcum and ascending colon, on which I have a word to say directly; but I have operated on two cases recently in which a much more limited parieto-colic peritoneal band, congenital in origin and a relic of this same structure, had bound down and constricted the ascending colon, giving rise to symptoms which precisely simulated chronic appendicitis.

I come now to the question of mobile cæcum, or, as I prefer to call it, mobile proximal colon, for it is a condition which does not involve the cæcum only. It has long been recognised that there is a not uncommon congenital abnormality of the peritoneum in which the cæcum and ascending colon, instead of being fixed down in the loin, are mounted on a loose mesocolon, continuous more or less with the mesentery of the small intestine; but we are only beginning to realise what grave symptoms may result from this error in development. The mobile proximal colon is the normal arrangement in pronograde mammals such as the cat and dog, but with the evolution of the upright posture fixation of the colon back into the loin by peritoneal fusion became necessary in order to enable the gut to push on its contents against gravity and to resist a tendency to enteroptosis. Our knowledge of the physiology of the colon, though advanced by recent discoveries, is still far from complete, but a study of its comparative anatomy and of the clinical evidence convinces one that these individuals with mobile proximal colons are from birth predisposed to constipation and the multifarious evils resulting from it. I have met with cases of this sort without any pericolic membrane, though the two abnormalities often coexist.

The symptoms of mobile proximal colon often closely resemble those of chronic appendicitis, and actual association of the two conditions is not uncommon, the intestinal stasis and appendicitis being secondary results of the mobility of the colon. Mere removal of the appendix in such cases is not enough, but in addition the proximal colon should be fixed back into the loin by a series of interrupted sutures, and Nature's usual method of fixation of the colon thus imitated. I have seen great relief from severe constipation and right iliac pain result from this operation of colopexy, and believe that it is a far more rational procedure than such mutilating operations as excision of the colon. The preoperative diagnosis of mobile proximal colon is difficult, but the greatest help is obtained by examination of the colon on the fluorescent screen after a bismuth or barium meal.

In addition to the congenital peritoneal adhesions that I have mentioned, inflammatory bands are not rarely met with in this region, both as a result of old-standing appendicitis and as a sequel of former tuberculous inflammation. Great and I believe unnecessary confusion has arisen between the congenital and the inflammatory type of peritoneal adhesions, the reason being that until recently the occurrence and significance of the former were not widely recognised. I do not say that it is never difficult to differentiate between them, but broadly it holds true that inflammatory peritoneal bands are tough, fibrous, opaque, and not very vascular, while congenital adhesions are translucent, more yielding, filmy, and vascular. If these distinctions are borne in mind it is usually possible to differentiate between them, though not, of course, before operation.

For lack of time I must pass over the question of ileocæcal growths and massive ileocæcal tuberculosis, though they should properly be considered with this subject, but I must make very brief mention of what is perhaps the commonest cause of an erroneous diagnosis of chronic appendicitis—viz., right chronic tubo-ovarian disease. It is due as a rule to an insidious ascending infection from

[4] THE LANCET, Dec. 13th, 1913, p. 1685.

the uterus, either gonorrhœal or septic. The pain is usually, though not invariably, worse at the menstrual periods, and in some of these cases on palpation in the right iliac fossa there occurs a reflex tonic spasm of the psoas muscle which I have seen mistaken both for an appendicular abscess and for a neoplasm. The subject of these ovarian conditions, simple and tuberculous, is far too large, however, to be dealt with adequately now. I feel that a too rigid demarcation between surgery and gynæcology has done harm to both, and that surgeons who are constantly operating in the abdomen might well take a far more intelligent interest in the tubes and ovaries than has been customary of recent years.

In cases of chronic pain in the right iliac fossa a careful and thorough physical examination, with an equally careful history, will often enable us to make a fairly confident diagnosis of the underlying condition, but in a large proportion of these cases we must frankly admit that with our present clinical methods a precise preoperative diagnosis is not possible. What we can say is that exploration is advisable, since where the pain in this region is persistent and severe there is nearly always an organic cause, capable of relief by well-considered surgical means.

It is not pleasant to operate without a precise preoperative diagnosis. Patients do not like it always, since they are apt to demand omniscience. But it is a far more scientific and indeed a more honourable thing to admit our limitations and to explore with an open mind than it is to operate with one's eyes blinded by a positive diagnosis, given where certainty is not truly possible.

The lesions which may simulate chronic appendicitis are so many that an adequate incision is imperative. There should be no more blind removals of the appendix in these dubious cases through a two-inch gridiron incision, but through a sufficiently large incision, usually a vertical one through the right rectus, and preferably under spinal anæsthesia, we should inspect not only the appendix but all the other structures that may possibly have been the cause of the trouble, and we should deal with them according to the actual conditions found, and not according to any preconceived opinion of the thing we ought to find.

Manchester.

UNIVERSITY OF EDINBURGH: ANNUAL REPORT.—The annual report for 1914 bears in many places the imprint of the war. During the year there were 732 fewer matriculated students than in 1913. The numbers matriculating in the Faculty of Medicine were 1025, or 290 less than in the previous year. The marked decrease in the numbers of male undergraduates in the various faculties is, of course, principally due to the fact that prior to the opening of the autumn session a large body of students, actual and prospective, had already gone to serve in some branch of His Majesty's forces. The university authorities have accorded various concessions to those who are serving their country, and additional students have thus been enabled to enrol themselves. The authorities have also strongly urged all male students to undergo military training. The following medical degrees were conferred during 1914: Doctor of Medicine, 41; Bachelor of Medicine and Master in Surgery, 1; Bachelor of Medicine and Bachelor of Surgery, 189. The Diploma of Tropical Medicine and Hygiene was conferred on eight candidates. Dr. James M. Graham was appointed first Lecturer in Surgical Pathology, this being one of the four new lectureships instituted by the University Court. The vacancy in the Chair of Medicine, caused by the retirement of Professor Wylie after 14 years' good service, has not yet been filled.

PNEUMOPERITONEUM OF THREE DAYS' DURATION FOLLOWING RESECTION OF A CARCINOMATOUS RECTUM;

EVACUATION OF THE GAS AND OF A PELVIC ABSCESS; RECOVERY; NO RECURRENCE AFTER FIVE YEARS.[1]

BY JOHN D. MALCOLM, F.R.C.S. EDIN.,
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THE absence of recurrence after five years is satisfactory, but the pneumoperitoneum constitutes the chief interest of the following case.

The patient, a stout woman, aged 60, complained of pain and hæmorrhage from the bowel. After six months an ulcerated tumour was found in the posterior wall of the rectum, but there was no fixation of the part, and on Dec. 31st, 1909, the rectum was removed in the Samaritan Free Hospital by a combined abdominal and perineal method described by C. H. Mayo.[2] The abdomen was opened, the bowel was divided above the new growth, and both ends were closed. The rectum, with as much pelvic fat as possible, was separated and everted through the anus. The projected mass was then cut off between the growth and the internal sphincter. The remaining part of the rectum was held in its everted position by forceps, and through it the lower end of the mobilised sigmoid flexure was brought down. This was opened, and the bowel ends were united by interrupted sutures and replaced in the pelvis. The union was considered so accurate that Mayo's recommendation to drain the pelvis through an incision behind the anus was not followed.

After the operation the highest temperature was 100° F., the bowels acted, and no unfavourable sign was noticed until the sixth morning, when the abdomen was distended. The bowels never failed to move when laxative medicine was given, and there was no vomiting, but the distension rapidly increased and on the ninth day it was very great, the abdomen being tense and tympanitic all over and the pelvic floor being pushed down. The temperature was 99·2°, the pulse-rate was increasing, but only 118 and of fair volume. Respiration was not greatly distressed, and the general condition was alarming only because of the increasing distension.

The abdomen was reopened and its anterior wall immediately fell with a flop upon the intestines, which occupied a very small space. A large quantity of gas necessarily escaped, and an absence of odour was observed. The exposed part of the peritoneal sac contained no fluid, and its serous surface was very pale and showed no sign of inflammation. The intestines were not adherent except in the pelvis, where all the parts were matted together. On separating these many ounces of offensive pus were released. The abscess cavity, which contained no free gas, was drained through the lower end of the incision, the remaining part of which healed by first intention and no further accumulation of gas took place. After drainage of a secondary collection of pus through an incision in the right groin the abscess healed slowly and otherwise recovery was uninterrupted. When the patient left my care the line of anastomosis was fixed by cicatricial tissue, but there was abundant room for the passage of fæces. On Dec. 28th, 1914, the patient's general health was good and her only trouble was constipation, which necessitated the use of senna pods every second day.

The specimen removed appeared on section to be localised and to grow into the lumen of the bowel rather than into the tissues. It was described by Dr. Cuthbert Lockyer as a columnar-celled carcinoma.

It is inconceivable that gas could escape from the intestine into the peritoneal cavity through any opening, however small, during a period of three days without an escape of organisms which would induce a general peritonitis. There is also no evidence that gas can escape through the wall of the

[1] A paper read in the Surgical Section of the Royal Society of Medicine, Jan. 6th, 1915.
[2] Surgery, Gynæcology, and Obstetrics, 1906, vol. iii., p. 236.

healthy intestine, and it would seem therefore that the gas developed in the peritoneal cavity, which could occur only from the action of some aerogenic organism. Many descriptions of such organisms have been published, but only two are generally recognised as producing gases in the tissues apart from putrefactive changes. These are the bacillus aerogenes capsulatus of Welch and the bacillus œdematis aerobius of Sanfelice.

The bacillus aerogenes capsulatus was isolated by Welch in 1891, and described by Welch and Nuttall in 1892.[3] A patient from the service of Sir William Osler died from repeated hæmorrhages from an aneurysm which ruptured through the chest wall. No gas was observed in the tissues before death, but eight hours later in cool weather there was a general emphysema most marked near the region of the rupture. The gas in the veins and tissues ignited with a slight detonation and burned with a pale blue flame. An analysis published in 1897 by E. K. Dunham[4] shows that the gas developed in such a case is composed of hydrogen 64·3 per cent., carbon dioxide 27·8 per cent., and nitrogen, &c., 8·1 per cent. In Welch and Nuttall's case it had no distinctive odour and there was no putrefactive odour or green discolouration of the body. The bacillus aerogenes capsulatus was found in association with the bubbles of gas and was the only organism that developed under anaerobic conditions. When 2½ c.c. of a pure culture were introduced into the vein of a rabbit no symptom of any kind followed in 5 out of 6 experiments. In the sixth the rabbit was seen quite lively 20½ hours after the injection, but half an hour later it was found dead, and after death it became emphysematous. This rabbit was pregnant, and two of her fœtuses were macerated and much smaller than the others, having evidently been dead some time. When a rabbit was inoculated and killed within two days emphysema always developed after death, and the gas accumulated "with almost startling rapidity" when the rabbit was killed a few minutes after the injection and kept at a temperature between 30° and 35° C. Introduced into the vein of a dead rabbit the bacillus caused bubble formation spreading to a limited extent along the vessel.

E. Fraenkel injected the bacillus into the subcutaneous tissues of mice without effect. In rabbits thus treated œdema with necrosis was occasionally produced, followed by recovery. In guinea-pigs a spreading gangrene with gas formation developed and was followed by death. There was no suppuration unless pyogenic organisms were also introduced, and in these experiments the production of gas was usually localised in the necrotic area, even after death. In 1896 Welch and Flexner recorded 23 cases in which with one exception the bacillus aerogenes capsulatus was identified. In no case was gas found in the peritoneal or pleural cavity without hæmorrhagic infarction of the bowel or lung. In one case the invasion of the bacillus was limited to two circumscribed areas of intestine. The bubbles, from the size of a pea downwards, involved the whole intestinal wall and the bacillus was found in the adjacent tissue, but in no other organ nor in the blood. It was present in the intestine. A case related by Graham Steward and Baldwin[5] was quoted in which a woman after a miscarriage became emphysematous all over her body four hours before death.

The bacillus œdematis aerobius was first described by Sanfelice. In 1901 Corner and Singer[6] recorded a case in which a bacillus was found "identical with that of Sanfelice." In 1904 Dudgeon and Sargent[7] described a case and discussed very fully the bacteriology of the organisms concerned. They showed that the bacillus isolated did not cause gas formation when a culture was introduced into the veins of a rabbit which was almost immediately killed. The bacillus was therefore not the bacillus aerogenes capsulatus of Welch. They concluded that their case and that of Corner and Singer were "examples of that small group of cases of emphysematous gangrene which was caused by the bacillus coli." They pointed out, as did Welch, that no one had ever produced gas formation in any animal by injecting this bacillus. But when it was introduced into the tissues with the staphylococcus pyogenes aureus (Chauvenez) or with the proteus vulgaris (Muscatello and Gangitano) gas formation had been obtained.

The details of the characters of the gas-producing bacilli are highly technical, and those interested should study the papers of Dudgeon and Sargent, Welch, and others. It seems to me that those of M. H. Gordon[8] and Theobald Smith[9] are also important. These writers have shown that streptococci and staphylococci and the bacillus coli are capable of differentiation into subspecies which breed true. It seems to me that these observations offer a satisfactory explanation of the many manifestations which are attributed, for example, to the action of the bacillus coli.

The bacilli under consideration are widely distributed in nature. They may be found in the intestines of animals, in milk, in surface water, in soil, in cesspools, and in many other surroundings. The bacillus aerogenes capsulatus was detected in 69 out of 250 wads of blank cartridges. This bacillus seems to develop gas more freely and more rapidly than the bacillus œdematis aerobius, and I think it was the active agent in the case now recorded, but without bacteriological evidence no definite statement can be made. The case is, I believe, unique. Dr. James F. W. Ross described exactly the same conditions of pneumoperitoneum with contracted intestines, but in his case the condition arose in a woman suffering from puerperal septicæmia with high temperatures. The gas was let out 34 days after delivery, but it reaccumulated, and death followed in three days. Mr. (now Sir Rickman) Godlee published in 1877 three cases of gas and fluid in the unwounded peritoneal cavity, and in one the patient was alive five weeks after the gas and fluid were released. This is the only case I

[3] A gas-producing bacillus (bacillus aerogenes capsulatus, nov. spec.) capable of rapid development in the blood-vessels after death. Bulletin Johns Hopkins Hospital, July, August, 1892, p. 81. This bacillus was described again in 1893 by E. Fraenkel (Centralblatt für Bacteriologie und Parasitenkunde, Band xiii., pp. 13–16), who called it the bacillus phlegmones emphysematosæ, but subsequently agreed that it was the bacillus aerogenes capsulatus. Eugene F. McCampbell (The Toxic and Antigenic Properties of Bacterium Welchii, Journal of Infectious Diseases, 6, 1909, pp. 537–63) asserted that the bacillus enteritidis sporogenes (Klein), the bacillus perfringens (Veillon and Zuber), the granulo-bacillus saccharo-butyricus immobilis (Schattenfroth and Grassberger), the bacillus anaerobie cryptobutyricus (Achalme), the bacillus cadaveris butyricus (Buday), the bacillus of Cesaris-Demel, and the bacillus emphysematis vaginæ (Linderthal), are all undoubtedly the bacillus aerogenes capsulatus of Welch.

[4] Report of five cases of infection by the bacillus aerogenes capsulatus (Welch), Johns Hopkins Bulletin, 1897–98, p. 69.

[5] Columbus Medical Journal, 1893.

[6] Emphysematous Gangrene, by Edred M. Corner and W. Douglas Singer. Transactions of the Pathological Society of London, 1901, pp. 42–60.

[7] Case of Emphysematous Gangrene caused by the Colon Bacillus, by Leonard S. Dudgeon and Percy M. Sargent. Transactions of the Pathological Society of London, 1904, pp. 107–118.

[8] Report on Some Characters by which Various Streptococci and Staphylococci may be Differentiated and Identified.

[9] Note on Bacillus Coli Communis and Allied Forms. American Journal of the Medical Sciences, vol. cx., 1895, p. 283.

know of except that now related in which an accumulation of gas in the peritoneal cavity has been survived without the closure of a wound through which the gas had passed into that cavity.

Wounds associated with emphysema of the surrounding tissues are almost always fatal unless the affected part is promptly amputated. Occasionally a cure may be effected by making very free incisions. On the other hand, the bacillus aerogenes capsulatus may circulate in the healthy tissues without harm, and the case now related shows that in exceptional circumstances recovery may follow distension of the peritoneum by gas. It seems to me that the organism gained access to the tissues during or soon after the operation, but was harmless until the pressure of the abscess diminished the vitality of the adventitious tissue between the pus and the peritoneal cavity sufficiently to allow the organism to develop in that membrane and cause gas formation, whilst some unfavourable condition in the abscess cavity prevented gas production there. Conversely the increased vitality of the tissues, brought about by the relief of tension in the abscess and in the abdominal cavity, was sufficient to arrest the aerogenic action of the bacilli.

The facts that the bacillus aerogenes capsulatus usually develops only in dead or dying tissue and the invariable association of the bacillus œdematis aerobius with septic organisms have developed a new interest since these notes were written. The men of our Expeditionary Force in France are constantly in recently-made trenches, where the opportunities are numerous for infection of wounds by anaerobic organisms found in the soil. Already a number of cases of emphysema complicating injuries have been recorded, and the bacilli under consideration have been separated from these wounds. It is obvious that to prevent the occurrence of this complication, which is almost always an indication of extreme danger, it is necessary to preserve the vitality of the parts in every possible way, and this necessity adds force to the plea made by Sir Watson Cheyne at the Medical Society and by others for an intelligent application of the teachings of Lister to the conditions of the present war. Aseptic surgery is impossible when the wounds are made septic as they are inflicted. An attempt should therefore be made to sterilise these infected wounds at the earliest possible moment by a vigorous use of antiseptics.

Wimpole-street, W.

OSTEOPLASTIC RESECTION OF THE SKULL IN DECOMPRESSION OPERATIONS ON THE BRAIN.

BY SPENCER MORT, M.D. GLASG., F.R.C.S. EDIN., F.R.S.E.,
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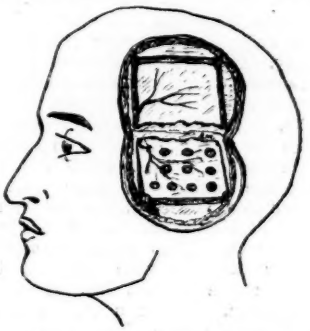
TWO cases of brain disease with pressure on the cortex, which I have at present under treatment, have suggested a method in modification of the current procedure in decompression operations, and it may be apposite at this time. One case shows the disadvantage of removal of a large portion of bone, the other case shows the converse difficulty which may arise from replacing a temporarily resected flap of bone.

The first patient, a male, aged 40 years, was operated on some months ago by a well-known brain surgeon for intracranial pressure, probably due to tumour. The bone in the left temporal region has been removed over the silent area, apparently by Cushing's method, and at this date there is a large protrusion of the brain forming a hernia cerebri. The other patient, a female, aged 60 years, was operated on by me 14 days ago. There was a fracture of the base of the skull with intradural hæmorrhage, and pressure signs on the left side of the motor area of the cortex.

A large flap was made in the soft tissues, and four holes were drilled with a Doyen's burr at the angles of a rectangle of bone, measuring 3 inches by 2½ inches. With a Gigli's saw the resection was completed and the brain exposed in 15 minutes from the first incision. On incising the dura an amount of blood issued and drained away, leaving a pulseless, flat-looking area of cortex. The lower anterior drill hole was enlarged with nibbling forceps and utilised as a drain, and the bone with its cover of soft tissue was replaced. Relief from pressure was observed for a week, then evidence of irritation recommenced. In the next four days



Diagrammatic sketch to illustrate "pepper-pot" trephining for the relief of intracranial pressure.

there were no less than 450 fits of Jacksonian nature counted, affecting mostly the right side of the face, with conjugate deviation of the eyes to the right and aphasia, followed by unconsciousness with Cheyne-Stokes respiration, due to pressure on the face centres and Broca's lobe. Four days after the onset of these seizures—that is, 11 days after operation—the wound was reopened and a quantity of blood-clot turned out from the brain surface, where it had collected under the bone and caused pressure. The whole portion of resected bone was removed from the tissue flap, and the skin and muscle and aponeurosis only replaced. Immediately and obviously the pressure signs ceased, and in the next three days there were but two slight fits observed, the breathing and pulse improved, and the general condition got better.

Now this case stands much the same as the first example quoted; there is a large bony gap, which must either remain, to the inconvenience or danger of the patient afterwards, with also the risk of hernia cerebri, or else the hiatus must be filled in by bone mosaic, osseous graft, or mechanical obturator. In similar cases, therefore, I propose to try the effect of a procedure which I have not seen described before, the object of which is to amalgamate the advantages of temporary resection with those of permanent removal of bone.

Osteoplastic reaction is easy, speedy, and gives good access, without good drainage to prevent the

ill-effects of any compressing agent effused beneath the window of bone. On the other hand, nibbling operations are more difficult and more prolonged, yet there is complete freedom from any fear of inefficient relief of pressure. What I suggest, then, is preliminary resection of a flap of soft tissue and bone in the usual way, following this up by "pepper pot" trephining of the flap raised. This can be done effectively and quickly with a burr, perforations ⅛ to ¼ inch in diameter being drilled at close intervals from the interior of the reflected plaque, right through the osseous tissue, but not including the soft parts. The bone flap will then be a sort of retaining cage of a basket-like, fenestrated, or pepper-pot texture. This should efficiently retain the brain without risk of hernia and yet with satisfactory relief from pressure. A diagram of the idea of the operation is given.

A THIRD OUTBREAK OF EPIDEMIC POLIOMYELITIS AT WEST KIRBY.

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THE occurrence of cases of poliomyelitis at West Kirby for the third year in succession appears to me to present so many interesting features that I have ventured to put these few notes together, as so far I am not aware that there have been similar occurrences in any other district.

The first case in 1914 occurred on August 10th in a house within a quarter of a mile of the solitary case of 1912, and within the same distance of the first case of 1913, and equidistant from many of the other cases of 1913. The father of the first patient is a medical practitioner who attended two of the cases of 1913, and although this may only be a coincidence, yet it opens up a field of speculation and emphasises the importance and necessity of precautionary methods being adopted by all who come in contact with, or have to deal with, acute poliomyelitis. The following are the numbers of children attacked in each outbreak: 1912, 1 case; 1913, 7 cases;[1] and 1914, 4 cases. Some brief clinical notes of the cases may be of interest.

CASE 1.—A female aged 3 years; West Kirby. The illness began on August 10th with violent headache but no sickness. He complained also of dryness of the mouth, and his breathing was very laboured and difficult. On the 13th twitching of his right arm and leg was noticed, and on the 15th paralysis was definitely established. The paralysis of his right arm and leg gradually disappeared, and three weeks later the boy was going about practically well. The affected muscles, however, remained flaccid, and the right knee-jerk absent. There were no other children in the house.

CASE 2.—A female aged 6 years; Hoylake. The illness began on Sept. 22nd with headache and sickness. On the next day there was complete paralysis of the child's arms and legs, and she was unable to lift her head. Death occurred two days later (on the 25th). There were two other children in the house, one younger than this case.

CASE 3.—A male aged 3 years; Hoylake. The illness began on Oct. 1st with feverishness and vomiting, but without headache. On the 4th paralysis of the left arm was noticed. There were two other children in the house, both older than this case.

CASE 4.—A male aged 6 years; Hoylake. The illness began on Oct. 2nd with feverishness, headache, and vomiting. On the 6th there was paralysis of both arms and legs, but left arm paralysis was pronounced. There was one younger child in the house.

[1] THE LANCET, Nov. 15th, 1913, p. 1380.

Distribution of Cases.

Case 1 occurred in West Kirby in the circumstances already mentioned. Case 2 occurred in Hoylake, about a mile away from Case 1. It may be mentioned here that Hoylake and West Kirby are practically one town and are model seaside resorts, clean, well drained, and well paved. Cases 3 and 4 were also in Hoylake, one on either side of Case 2 and about half a mile away from it. No other cases occurred in West Kirby and, as far as is known, no cases developed among visitors after leaving the district. No cases were reported from any of the adjoining districts.

Possible Sources of Infection.

Milk.—All the Hoylake cases had a common milk-supply. In outbreaks of poliomyelitis it is most unusual to find the milk-supply concerned. The apparent implication of the milk-supply here might, of course, be only another coincidence, but Case 3 was fully a mile away from Case 4, in a well-populated district, or rather town, and therefore the milk, with those engaged in its distribution, is bound to fall under suspicion.

Dust.—The two towns are very clean and free from ordinary dust. Sand from the shore is often blown about the towns by the wind, but this is more usual in winter than in summer.

Flies.—No excessive prevalence of flies was noticed. Against the theory of infection by means of flies it may be pointed out that poliomyelitis is increasing, while owing to the diminishing use of horses the chances of infection by biting flies are steadily decreasing.

Other insects.—In the facts elicited regarding the cases of 1912 and 1913 there appeared to me to be some foundation for suggesting that possibly the infective agent was at times conveyed by means of lice. In this outbreak it has not been possible to collect any evidence which would substantiate this theory. On the other hand, I may say that on several occasions I have been asked if it was possible for sand fleas to convey the infection of poliomyelitis, as most of the children affected had paid recent visits to the shore.

Carriers.—It is held by many that the disease is spread by carriers, and that the cases are only "unfortunate incidents in a widespread benign infection" (R. McLaren). It is quite possible that this is so either directly or indirectly. The occurrence of these four cases would appear to support the theory of carriers, and additional support is probably given by the implication of the milk-supply.

It is worthy of note also that these four cases occurred within a very limited area, and amongst a population of 14,000, and that the disease has taken two years to spread from West Kirby to Hoylake, a distance of only a mile, in, as already mentioned, a well-populated area.

In conclusion, I may remark that though it was not possible to trace any connexion between Case 1 in West Kirby and Case 2 in Hoylake, yet in the recurring outbreaks of three successive years it seems as if one could almost trace a case-to-case infection. I have little doubt that the many puzzles the epidemiology of poliomyelitis apparently presents will, much as in the case of malaria, be finally solved when the means of distribution of the infective agent is or are clearly established.

Hartlepool.

ARTERIO-VENOUS ANEURYSM OF THE FEMORAL VESSELS, FOLLOWING BULLET WOUND THROUGH THE LEFT THIGH.

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THIS case is of current interest as it occurred in the present war, and of surgical interest on account of the comparative rarity of the condition.

The patient was a private in the Black Watch, and he was wounded at Ypres on Oct. 29th, 1914, by a rifle bullet which passed through the upper third of his left thigh, from before backward. He was treated for two days at a clearing station, and was then sent into hospital at Boulogne, where he remained for three weeks. He says that on the third day after his admission to hospital at Boulogne his wounds were practically healed and he was allowed to get up. When he did so he found that on walking about he had a tingling pain in his left foot, and on the second day on which he was up he complained of this to the surgeon who examined him, and found that there was a thrill to be felt in the region of the anterior wound. He was put to bed and he remained there until he was sent to England. He came straight through to us from Southampton and reached the Nottingham General Hospital on Nov. 22nd, 1914.

On admission the patient had a pulsating swelling, of about the size of a pigeon's egg, about 4 inches below Poupart's ligament, in the line of the femoral vessels. On the upper and inner portion of the swelling was the wound of entrance—healed. The swelling was expansile, and there was a well-marked bruit to be heard on auscultation. A very marked thrill was to be felt, especially in the line of the vessels proximal to the swelling. Pressure on the femoral artery caused the pulsation in the swelling to cease. These foregoing physical signs left no doubt that a wound of both the artery and the vein had been inflicted, and from the situation it was reasonably probable that the wound in the artery was below the origin of the profunda femoris. The patient was kept in bed, and it was observed that the swelling was increasing in size.

Operation was performed on Dec. 1st. The steps of the operation were as follows. A long incision in the line of the femoral vessels was made from Poupart's ligament for about 8 inches downwards, and the femoral artery and vein were exposed and demonstrated *above* the aneurysm; similarly, the artery and vein were exposed *below* the aneurysm. Then around each vessel separately, both above and below the aneurysm, was placed a temporary ligature consisting of small-sized rubber tubing. In other words, a tourniquet was applied directly to the vessels in the four situations. This secured that the further steps of the operation on the injured vessels were quite bloodless. The femoral vessels where the bullet had traversed them were firmly adherent to each other, and there was scar tissue in the neighbourhood. They were carefully dissected from each other, and it was found that the artery had a wound in front and behind, and that the vein had a wound on its outer side only. The situation and relations of the vessels explain this, as at the position where the wound occurred the vein is beginning to pass behind the artery. Consequently a wound through the artery just caught the outer border of the vein. The profunda femoris artery was demonstrated, arising about 1¼ inches above the wound in the femoral artery. The femoral artery was then ligatured above and below the wound in it, and the wounded portion was cut out. The wound in the vein was a longitudinal slit about ¼ inch in length. This was repaired by suture with fine silk and intestinal needle, and the continuity of the blood stream restored. The temporary ligatures of rubber tubing were then removed from the four points where they had been applied, and the wound was found to be dry, no hæmorrhage taking place from either vein or artery. The deep fascia was sutured with catgut and the skin with silkworm gut.

The operation was performed under spinal anæsthesia, which was quite perfect. The patient made an entirely uneventful recovery, getting up at the expiration of three weeks.

Nottingham.

THE VALUE OF TUBERCULIN AS AN ADDITION TO SANATORIUM TREATMENT.

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I LIMIT myself to the consideration of experience with tuberculin at King Edward VII. Sanatorium. We have used tuberculin extensively, and as a result of this work we are now enabled to give a partial answer to the question, to what extent, if any, was the benefit to be derived from an average stay of some six months in the Sanatorium increased by the use of tuberculin, as compared with a similar length of treatment in the Sanatorium when no tuberculin was given.

Results of Tuberculin Treatment.

During the 19 months from October, 1911, to May, 1913, tuberculin was given to 154 patients, this number representing 62 per cent. of all the patients treated in the Sanatorium during this period. Of these 154 patients, 130 (or 84·4 per cent.) had tubercle bacilli in their sputum; the remaining 24 patients had not. They may then be classified as follows: 1. Cases in which pulmonary tuberculosis was believed to exist, though the presence of tubercle bacilli could not be demonstrated in the spctum, 24. 2. Definite cases of pulmonary tuberculosis, tubercle bacilli being present in the sputum: (*a*) Cases of early disease, (Group I.) 22; (*b*) cases of moderately advanced disease, (Group II.) 81; and (*c*) cases of advanced disease (Group III.) 27.

Results of Treatment in 24 Cases in which Tubercle Bacilli were not Found.

These 24 patients all did very well indeed, but it is difficult to decide how best to classify them on their discharge. To record them as on admission presenting early disease, and on discharge arrested disease, would give the encouraging result of something like 100 per cent. of complete recoveries. Such a record, however, would be of no value. These so-called early cases do very well indeed under ordinary sanatorium treatment, it being very unusual for such cases to fail to make an apparently complete recovery. The after-history records of

King Edward VII. Sanatorium show also that it is an unusual occurrence for such patients to relapse after receiving a course of sanatorium treatment and education. The treatment, therefore, of cases diagnosed as pulmonary tuberculosis in the absence of tubercle bacilli, though doubtless of value to the individual patients and of interest in other respects, furnishes us with no useful information as to the value of tuberculin. All that can be said is that such cases do equally well on sanatorium treatment with tuberculin and on sanatorium treatment alone.

The Result of Treatment of 130 Cases in the Sputum of which Tubercle Bacilli were Found.

The results were as follows: Much improved, 64·6 per cent.; improved, 17·7 per cent.; stationary or worse, 17·7 per cent.; lost bacilli, 32·3 per cent. These records of general results and for the loss of bacilli are better than any previous records published by the Sanatorium. It is essential, however, that it be borne in mind that these figures refer to the treatment of selected cases; for the actual proportion of tuberculin-treated cases amounted to but 62 per cent. of all the cases treated in the Sanatorium during the period now under review. The degree of selection exercised introduces a difficulty in estimating the success of our work, since we have no records of the results in similarly selected cases treated by sanatorium methods alone. There is, however, no doubt at all that if the 30 to 40 per cent. of less favourable cases were eliminated from our records of results of sanatorium treatment alone, the figures would be most materially improved. The selection of cases for tuberculin treatment to the exclusion of the less favourable therefore introduces a serious element of fallacy.

A Comparison of the Results of Tuberculin-treated Patients and Patients treated in the Sanatorium without Tuberculin.

The only possible method we have for making a comparison between the results of the tuberculin treated and the non-tuberculin treated is to set out the general results obtained for the whole Sanatorium in the pre-tuberculin days side by side with similar results obtained since the introduction of tuberculin. This gives us a view of the effect upon the general results of the introduction of some 60 per cent. of selected cases treated with tuberculin.

In the following tables I have set out for purposes of comparison the general results and the effect upon the sputum under the two conditions stated: 1. In 764 cases treated in the Sanatorium without tuberculin. 2. In the treatment of 172 unselected cases treated in the Sanatorium during 14 months, of which cases 64·5 per cent. received tuberculin. 3. In the treatment of 130 selected cases treated with tuberculin. These records refer exclusively to patients with tubercle bacilli in their sputum.

TABLE I.—COMPARISON OF GENERAL RESULTS.

1. *Results of Treatment of 764 Consecutive Unselected Patients (T.B.+ cases) on Sanatorium Methods Alone.*

	Arrested or much improved.	Improved.	Stationary or worse.
Group 1. (183 cases)	... 87·9 % (161)	... 6·5 % (12)	... 5·4 % (10)
Group 2. (357 cases)	... 57·4 % (205)	... 20·1 % (72)	... 22·4 % (80)
Group 3. (224 cases)	... 20·5 % (46)	... 36·6 % (82)	... 42·8 % (96)
Total. (764 cases)	... 53·9 % (412)	... 21·7 % (166)	... 23·0 % (186)

2. *Results of Treatment of 172 Consecutive Unselected Patients (T.B. + cases) during 14 months—March, 1912–May, 1913—of whom 111, or 64·5 per cent., received Tuberculin.*

	Arrested or much improved.	Improved.	Stationary or worse.
Group 1. (25 cases)	... 84·0 % (21)	... Nil.	... 16·0 % (4)
Group 2. (110 cases)	... 55·4 % (61)	... 21·8 % (24)	... 22·7 % (25)
Group 3. (37 cases)	... 18·9 % (7)	... 27·0 % (10)	... 54·0 % (20)
Total. (172 cases)	... 51·7 % (89)	... 19·7 % (34)	... 28·4 % (49)

3. *Results of Treatment of 130 (for the most part) Selected (T.B. + cases) Patients from November, 1911, to May, 1913, treated with Tuberculin.*

	Arrested or much improved.	Improved.	Stationary or worse.
Group 1. (22 cases)	... 95·4 % (21)	... Nil.	... 4·6 % (1)
Group 2. (81 cases)	... 70·3 % (57)	... 13·5 % (11)	... 16·2 % (13)
Group 3. (27 cases)	... 22·2 % (6)	... 44·4 % (12)	... 33·3 % (9)
Total. (130 cases)	... 64·6 % (84)	... 17·7 % (23)	... 17·7 % (23)

TABLE II.—COMPARISON OF SPUTUM RESULTS.

1. *Results of Treatment of 764 Consecutive Unselected (T.B. +) Cases on Sanatorium Methods alone.*

Lost T.B. whilst in the Sanatorium:—

Group 1	43·1 per cent.
Group 2	17·8 ,,
Group 3	6·6 ,,
All cases together...	20·5 ,,

2. *Results of Treatment of 172 Consecutive Unselected (T.B. +) Cases, of which 64·5 per cent. (111) received Tuberculin.*

Lost T.B. whilst in the Sanatorium:—

Group 1	49·6 per cent.
Group 2	25·6 ,,
Group 3	8·3 ,,
All cases together...	25·5 ,,

3. *Results of Treatment of 130 Selected (T.B. +) Cases Treated with Tuberculin.*

Lost T.B. whilst in the Sanatorium:—

Group 1	59·0 per cent.
Group 2	33·3 ,,
Group 3	7·4 ,,
All cases together...	32·3 ,,

Admitting the difference in the total number of cases dealt with, the records for all cases during the pre-tuberculin years, and for a period of 14 months, during which tuberculin was largely used, are strikingly similar. They indicate that whilst the use of tuberculin has had no appreciable effect upon the general results, as regards the loss of bacilli there has been an appreciable difference, 5 per cent. more patients having been discharged free from bacilli than in former years. It is noticeable, too, that the greatest improvement is seen in the group of moderately advanced cases, the figures for loss of bacilli having risen from 17·8 per cent. to 25·6 per cent., a significant increase, since this group includes the majority of the patients.

An Interim Opinion as to the Value of Tuberculin.

It is impossible to give anything like a final opinion as to the value of tuberculin on the strength of our present experience. Moreover, an interim opinion is necessarily limited to the value

of tuberculin when administered by the method popularised largely by the work of Bandelier and Roepke, which, as the one in most general use, was selected for the first trial. We are now using the method recommended by Trudeau and Sahli, amongst others, by which considerably smaller doses are given, thereby securing much greater immunity from the risk of provoking reactions.

Our experience as yet has shown that in tuberculin we have not a remedial agent which is to revolutionise either our sanatorium results or our conception of the outlook for the average consumptive. Tuberculin is not a cure in the ordinary sense of the term, and no immediate or striking results are to be expected from it, even with the most favourable cases. The good effect of tuberculin is at the best exerted almost imperceptibly and over a long period, the slowness of its action being such that it is often difficult to determine as regards patients treated under the most favourable and hygienic conditions how much, if any, of the improvement that takes place is due to its use.

As employed at the Sanatorium during the first 18 months of the observations on tuberculin, it appeared to exercise a favourable influence in the treatment of a certain proportion—some 25 to 30 per cent.—of the cases admitted to the Sanatorium. For a fair number of those patients who can take steadily increasing doses of tuberculin without reactions it is a useful addition to the other means employed in sanatorium practice. This favourable influence is to be recognised chiefly in the more rapid disappearance of bacilli. As to the kind of case in which we may expect to find tuberculin of assistance, our experience is that it is a patient with a good outlook, who has rapidly responded to general hygienic measures, and who has shown evidence of constitutional vigour and recuperative power. Already improving, the addition of tuberculin in the treatment of a good many of such cases seems to expedite the full establishment of convalescence.

In a considerable number of cases tuberculin, so far as we can judge from immediate clinical results, has no obvious effect. The patient is gradually made tolerant to tuberculin, but this is the only objective indication of its action. Further, in a certain proportion of cases tuberculin is more than a negative agent; it is positively prejudicial. We have received no encouragement in the treatment of febrile cases with tuberculin, and have quite failed to obtain confirmatory evidence of the antipyretic value which some observers have claimed for it. Tuberculin cannot be looked upon as a means whereby an unfavourable case can be converted into a favourable one, or as likely to turn the scale in the patient's favour when his progress is hesitating or definitely retrogressive. More often than not it will do harm.

It follows, then, that the administration of tuberculin is quite unsuitable as a routine method of treatment for all cases of pulmonary tuberculosis, and that its indiscriminate and careless use on a large scale can only end in disasters.

Commentary.

It is a matter of opinion how far our experience at the Sanatorium helps us in the solution of the larger issue—namely, the therapeutic value of tuberculin. It is generally stated that in order to obtain the full advantage the process of immunisation by tuberculin inoculations should extend over a very long period, at least a year or more. It is for this reason that dispensaries, and sanatoria working in connexion with such institutions, may be expected to attain a greater measure of success than sanatoria working single-handed. So far as our work at King Edward VII. Sanatorium is concerned, there has been no such coöperation, and with but few exceptions the patient's course of tuberculin has terminated with his discharge from the Sanatorium.

The question of the continuance of tuberculin treatment by patients after their discharge from the Sanatorium is one of considerable difficulty. It is at least very probable that in many cases it would be to the advantage of the patient if his course of tuberculin, already of some four months' duration, could be continued for a very considerable period on his return home. At the present time it is impossible in most cases satisfactorily to arrange for this, for, to judge by our experience, the medical profession generally in this country is not yet sufficiently versed in tuberculin administration to warrant their undertaking this treatment with any confidence. Further, in my capacity of examiner of candidates for admission to the Sanatorium I continually see most unfortunate results of tuberculin treatment. It is true that these bad results are for the most part the outcome, seemingly, of what I should consider to be a faulty method of tuberculin administration. At the same time, there is reason to believe that the methods adopted represent a conception of tuberculin treatment which is widely held by the profession at the present time. Personally I should like to see the trial of tuberculin upon a large scale, and in respect to the patients at King Edward VII. Sanatorium should like to arrange for their tuberculin treatment after their discharge, since the results of such observations could not fail to provide most valuable information. I do not think, however, that this extended experiment is justified unless a method of treatment is adopted which is absolutely free of risk to the patient. The first essential is to be sure that the treatment will do no harm. Herein to my mind lies the crux of the tuberculin problem at the moment.

With respect to the Administration of Tuberculin.

The administration of tuberculin centres round the question of reactions. Is it a serious responsibility to provoke a reaction, or is a reaction nothing worse than a hindrance in the course of immunisation, a transient and harmless episode? Again, is it a simple matter to give a full course of inoculations without producing febrile disturbances, or is it a task of considerable difficulty, amounting in many cases to an impossibility? It would seem remarkable that upon such an essential point as the safety of producing a reaction there should be such a divergence of opinion.

Our Experience at the Sanatorium.

Reactionless courses.—The evidence is afforded by the records of 40 patients, who lost their tubercle bacilli, and who, whilst undergoing tuberculin treatment, followed the ordinary routine of sanatorium treatment and were fully restored to general health and capacity for work.

We naturally turn to the records of our most successfully treated cases to note to what extent their tuberculin courses were reactionless or otherwise; and it is very significant that without exception these cases, 40 in number, which were thus

successfully treated on ordinary sanatorium lines, plus tuberculin, had reactionless courses, and that no one case which was troublesome to immunise on account of reactions was successful, as judged by the loss of bacilli. One factor, then, which these successful cases all had in common was a capacity to take increasing doses of tuberculin without reactions; their treatment in consequence presented no difficulty, and in respect of exercise they were able to follow the same treatment as has always been prescribed to favourable cases at the Sanatorium. These 40 patients, in short, were all of a very favourable clinical type; they represented 30 per cent. of the cases selected as being suitable for tuberculin treatment. Although complete recovery, with loss of bacilli, is compatible with a reactionless course of tuberculin when given at the same time as ordinary sanatorium treatment, it is by no means certain that a prolonged reactionless course of treatment will result in any obvious success. On the contrary, many of our cases took tuberculin just as well as the 40 cases just considered, over periods, for example, of 30, 40, and 50 weeks and more, but with no apparent benefit. That is to say, their progress was identical with the progress made by non-tuberculin treated cases which do not lose their bacilli. There is one difference only, in that the tuberculin treated were rendered tolerant to considerable doses of tuberculin.

Tuberculin Courses Marked by Reactions.

I have been able to extract from our records sufficient evidence to prove conclusively that reactions are a source of danger; fortunately it is not considerable, for our practice has been to discontinue tuberculin so soon as it is evident that it cannot be given without risk. In brief, I have observed the occurrence of increased activity of the disease, definite extension of the area of disease, the development of acute pleurisy with effusion, and in one case of pneumothorax following upon slight reactions. Apart from these more serious effects, I have seen many cases in which favourable progress was retarded by occasional slight reactions or by a slight degree of malaise, unaccompanied by definite febrile disturbance, consequent upon tuberculin inoculations. What has impressed me even more forcibly of the grave dangers of reactions are the results of treatment marked by repeated febrile disturbances, which continually come under my notice when examining candidates for admission to the Sanatorium. During the past 12 months I have seen 14 patients who, beyond all doubt, had been seriously injured by inoculations of tuberculin, and in many of these, unfortunately, the damage was of an irremediable nature.

I would urge most strongly that safety in tuberculin treatment lies in the strict avoidance of reactions, and in my opinion unless this is realised the general use of tuberculin throughout the country will prejudice the prospects of the average consumptive patient.

Bandelier and Roepke are of the opinion that if the reacting temperature is not greater than 100·4° F. it is unnecessary to decrease the dose. Many observers in their practice are bolder than this. I entirely disagree with this attitude towards reactions. Sahli[1] has much more nearly expressed my views in the following words: "One is not justified in provoking febrile reactions, and all other manifest toxic actions must be avoided. ..... A rise of 4 to 5-tenths of a degree F. must be considered as a febrile reaction, if the time of its occurrence clearly shows that it is the result of an injection."

Our own records show that very often reactions to 100° F. do no obvious harm, but it is not to the point. So long as there is no evidence to prove that they are of any benefit, and considerable evidence to show that the intensity of reactions cannot be controlled, and at any time they may do great harm, there can be no room even for discussion as to what is the correct practice.

Tuberculin as an Aid in Diagnosis of Pulmonary Tuberculosis.

It is now generally recognised that the production of a local reaction at the seat of inoculation and the raising of the temperature as the result of a tuberculin injection afford no useful information. These results merely indicate that infection by tuberculosis has occurred at some time, but do not help us to determine whether or not tuberculous disease exists, and should it exist, whether it is active, quiescent, arrested, or obsolete. These facts are not sufficiently recognised. On the other hand, the absence of any reaction following a series of diagnostic inoculations excludes the existence of tuberculous disease, and the occurrence of a focal reaction in a suspected organ—for instance, in the case of the lung the development or increase of adventitious sounds—warrants a positive diagnosis. Tuberculin for diagnostic purposes, therefore, has a definite though somewhat restricted value.

In conclusion, I would express the opinion that it is impossible not to look upon tuberculin sympathetically, for as a means of treatment it at least rests upon a scientific basis. Wholesale condemnation and extravagant praise of tuberculin as a means of treatment of pulmonary tuberculosis are alike unwarranted. What we now require is more work, accurately observed and carefully recorded, and more of the scientific and critical spirit in our judgments.

Midhurst.

[1] Tuberkulin Behandlung und Tuberkulose Immunität.

HUNTERIAN SOCIETY.—At the next meeting of this society on Wednesday, Jan. 13th, at 9 P.M., in the Barbers' Hall, Monkwell-street, E.C., Mr. Donald Armour will deliver the second Hunterian Society's lecture on Surgical Experiences during the Present War. All members of the medical profession are invited.

LITERARY INTELLIGENCE.—As usual, the new issue of the British Pharmacopœia will be accompanied by the publication of several books which are based upon, and supplement, the information contained in the official work. In this connexion we draw attention to Messrs. J. and A. Churchill's announcements: "Materia Medica," fourteenth edition, by Dr. W. Hale White, physician to Guy's Hospital. "The Book of Prescriptions," tenth edition, by Mr. E. W. Lucas, a member of the British Pharmacopœia Reference Committee. "The Book of Pharmacopœias," by Mr. E. W. Lucas and Mr. H. B. Stevens. This is a new book containing about 5000 formulas, British and foreign, arranged on a comparative system.—Mr. H. K. Lewis, in announcing for early publication the new (sixteenth) edition of the Extra Pharmacopœia, has issued a pamphlet describing the special features of the two volumes into which this work is now divided. The new edition has been revised in conformity with the British Pharmacopœia, 1914, and a synopsis of the more important changes has been provided.—Messrs. Smith, Elder and Co. announce for publication "The Early Diagnosis of Heart Failure, and other Essays on the Heart and Circulation," by Dr. T. Stacey Wilson, senior physician to the General Hospital, Birmingham. The volume is illustrated by over 130 original diagrams.

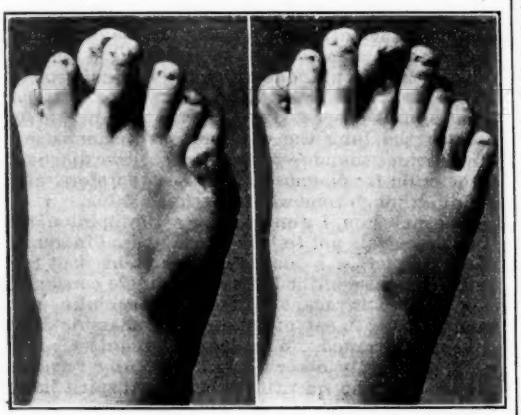
Clinical Notes:
MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF SUPERNUMERARY TOES.

BY WALTER FALLA, M.R.C.S. ENG., L.R.C.P. LOND.

A FEMALE patient, aged 22, recently consulted me for an interesting and unusual deformity of her right foot, which caused her considerable inconvenience in walking owing to the overlapping of some of the toes. The left foot was normal, but the right one was considerably broader and was provided with eight fully developed toes, three of which were on one side of the big toe and four on the other, and each one articulated with a separate metatarsal bone. Owing to the rarity of this malformation I had the foot photographed. Fig. 1

FIG. 1. FIG. 2.



shows the foot in its natural position, with the toes overlapping each other, and Fig. 2 shows the toes spread out. I amputated at the metatarsal joints the two outer toes and the one next to the big toe on the left, the result being that the patient can now walk without the slightest discomfort. There is no family history of any such deformity, although the patient has several brothers and sisters.

Jersey.

NOTE ON A CASE OF GOUNDOU.

BY R. SEHEULT, M.D. EDIN.,
RESIDENT SURGEON, COLONIAL HOSPITAL, TRINIDAD, B.W.I.

THIS singular and obscure condition, which is characterised by the formation of hard, smooth, symmetrical tumours at the side of the nose similar to exostoses, occurred in a little negro girl who came under my notice in February, 1913; she was born in Tobago in 1902, and arrived in Trinidad about eight years ago with her mother, who gave the following history. In 1910 she noticed a small swelling on each side of the child's nose; the swellings were hard and painless, and increased slowly in size until about two years ago, when they appeared to become stationary; the child complained occasionally of slight headache and of a feeling of obstruction in the nostrils; there was no nasal discharge. No history of yaws or syphilis could be elicited. The mother had had nine children, all healthy. When the child came under my observation the swellings were fairly well marked; they were hard, smooth, and dome-shaped, standing off the surface about ¼ inch; the skin overlying the growths was natural and freely movable. Examination of the nares and mouth revealed nothing abnormal, and the presence of these swellings did not appear to cause any discomfort to the child. It may be of interest to note here that both tibiæ were distinctly thickened, and that the mother stated there was a case of yaws in her house when the child was two years of age.

This is the only case of goundou, or what appears to me to be goundou, I have met with during the 20 years I have been connected with the hospitals of the colony, and I can find no previous record of the occurrence of this affection in the island. The condition is reported to be fairly common in West Africa, but its etiology remains in obscurity. Some affirm that the morbid process begins during or soon after an attack of yaws, whilst others maintain that it is started by the larvæ of some insect which find their way into the nostrils; others, again, are of opinion that the condition is *sui generis*. Dr. Albert J. Chalmers has published in THE LANCET a report of six cases of this disease under the name of "Henpuye."[1] Dr. Henry Strachan[2] has reported an instance of this strange disease in a Jamaica negro child, and suggests that it may be an example of atavism referable to some tribal peculiarity of the original West African stock. In my case I was unable to elicit any history of the larval invasion of the nostrils, nor was there any clear evidence or manifestation of yaws—a disease, however, which was extremely common a few years ago and is still prevalent in Tobago, where the child was born and lived during three years.

A CASE OF ENLARGED THYMUS AND ATELECTASIS.

BY J. C. MCWALTER, M.D. DURH., LL.D. N.U.I.,
EXAMINER IN MEDICAL JURISPRUDENCE AND DEPUTY GOVERNOR OF THE APOTHECARIES' HALL, IRELAND.

THE charge of "overlying" made against mothers whose infants are found dead in bed and the sudden deaths which unexpectedly occur during operative procedure have given rise to a comfortable theory of the status lymphaticus which supersedes or supplements the older theory of "thymic asthma" as a cause of otherwise inexplicable death.

In the present state of our knowledge it seems a duty to record the particulars of any case where an affection of the thymus gland may have been the cause of death. A short time since the infant of a woman whom I had been attending was found dead in the bed. The police suspected overlying or negligence, and an inquest was held. At the post-mortem examination the body was found to be well nourished, weighing 12½ lb., the age being 3 months. There was uncurdled milk still present in the stomach, and all the organs appeared to be healthy, but the thymus gland seemed enlarged—being bigger than the heart, whilst both lungs were of a somewhat purplish and collapsed atelectasoid condition.

I attributed the death to asphyxia, probably aggravated by the enlarged state of the thymus gland. It is doubtful if this conclusion was really

[1] THE LANCET, Jan. 6th, 1900, p. 20.
[2] Brit. Med. Jour., Jan. 27th, 1894.

correct, as syncope rather than asphyxia causes death in cases of large thymus. On the other hand, I found nothing that could safely be called status lymphaticus, nor met evidence of that fine capillary bronchitis which Paltauf says is often the cause of death in such cases. This case seemed to show a connexion between an enlarged thymus and an undeveloped shrunken condition of both lungs—almost atelectasis.

Dublin.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Exhibition of Cases and Specimens.

A MEETING of this section was held on Dec. 11th, 1914, Mr. T. H. KELLOCK, the President, being in the chair.

Dr. F. J. POYNTON showed a case of ? Aortic Disease, the interest of which lay in the entire absence of any history of heart disease or cause for heart disease except tonsillitis, and in the exact interpretation of the physical signs. The patient, a boy aged 5 years, had been sent up to hospital by a school medical officer for heart disease. For two years the mother had noticed that the child soon got tired and breathless on exertion. There was no history of rheumatism in the child or the parents; also no fever. The tonsils were very large and almost meeting. The pulse was somewhat irregular, 84, and strikingly small in volume. The heart showed no apparent enlargement, and the impulse was not forcible. Apex: First sound short, and systolic murmur. Aortic cartilage: Rasping systolic murmur conducted upward and outward. There was no thrill over its maximum. This murmur, traced towards the apex, got fainter, and then the apical murmur was heard increasing in intensity to the apex. It would seem that these were two different systolic murmurs. The basal murmur could be heard at the pulmonary base, but was fainter there than in the aortic region.

Dr. J. L. BUNCH showed a child with Nine Patches of Morphœa. The patient, a girl aged 11 years, had developed the first lesion a few weeks previously just below the left iliac crest. It had appeared as a dense yellowish-white small patch with no suspicion of redness or coloured border. The outline was sharp, and the skin over it was distinctly harder than the surrounding healthy skin. Eight other similar but smaller patches had since appeared on the chest, back, and shoulders. The face was free. There was no evidence of peripheral neuritis or ganglionic lesion.

Dr. BUNCH also showed a case of Ichthyosis in a child. The disease had been present since birth, and the child was now 8 years old. The extensor surfaces were most affected, but the flexor aspects and the face were also involved. The epidermis was thickened and pigmented, the surface was covered with a coarse scaliness, and there was pronounced follicular keratosis. Subjective symptoms were practically absent.

Dr. G. A. SUTHERLAND showed a case of Myatonia Congenita with Dilatation of the Colon. The patient was a male, aged 2 years, who had been admitted for an abdominal swelling; the abdomen had been noticed to be very large. The bowels were usually constipated; recently the motions had been loose, scanty, and offensive. A large swelling occupied the right side of the abdomen and extended into the iliac region on the left side; apparently fæcal. The anal orifice was very small and tight. X rays showed great dilatation of the colon. The abdominal mass was removed by enemata, &c., and the sphincter ani was forcibly dilated. Great improvement as regards the action of the bowels and size of the abdomen resulted. The child could sit up, but could not stand or pull himself into the erect posture. The muscles were small and markedly hypotonic; the joints were very flaccid. The knee-jerks were absent. There was no marked rickets. There seemed to be some mental backwardness.

Dr. ROBERT HUTCHISON showed a case of Hypertrophy of the Gums. The patient, a boy aged 5 years, had had enlarged gums all his life, which now made it impossible for him to shut his mouth properly. The gums were greatly hypertrophied, the teeth being almost buried in them. Pus could be squeezed out from around some of the teeth. The boy seemed otherwise in good health.

Mr. PHILIP TURNER showed a case of Pulsating Tumour of the Scalp. The patient, a girl aged 18 years, had had for the past nine years a pulsating swelling of the scalp. This appeared shortly after a fall in which she struck her head against a concrete floor. She was not unconscious after the fall, and there were no symptoms of concussion and no open wound of the scalp. The tumour had caused no symptoms, but had increased slightly in size. Three or four months ago the skin over the swelling ulcerated and became very septic, but there was no hæmorrhage; as the result of treatment the ulceration soon began to heal. There was now a soft, pulsating swelling occupying the occipital region and extending nearly to the vertex. An X ray examination showed no opening in the bone, though the surface appeared irregular and grooved.

Dr. J. D. ROLLESTON showed a specimen of Cerebral Embolism in Diphtheria from a girl, aged 8 years, admitted to hospital on Oct. 24th with severe faucial and nasal diphtheria on the third day of the disease. Large doses of antitoxin were given, and the throat became clean on the 28th, but the same day the heart, hitherto normal, showed some dilatation and weakness of the first sound. The voice became nasal on the 30th. At 11.15 A.M. on Nov. 7th she retched, the respirations became rapid, the colour cyanosed, and a convulsive movement of the right arm and loss of consciousness ensued. Double ankle clonus and double extensor response were obtained. Both abdominal reflexes were lost, but the corneal reflex, though absent on the right, was active on the left side. A cardiogram showed premature ventricular contractions. The pulse was 115. On Nov. 8th the pulse was 160, and during short paroxysms rose to 220. The specimen showed embolism of the basilar artery, of the superior cerebellar arteries, and to a greater or less extent of all the arteries entering into the formation of the circle of Willis—viz., the posterior cerebral, posterior communicating, internal carotid, anterior cerebral, and middle cerebral arteries. The lesions were much more marked on the right than on the left side. An ante-mortem clot was found in the left ventricle and a small infarct in the left kidney.

Dr. E. B. GUNSON showed a specimen of Pericarditis in Scarlet Fever. The patient, a girl aged 15 years, was admitted to hospital suffering from scarlet fever on the thirtieth day of disease. She had never had rheumatic fever, but had had occasional "growing pains." On admission the temperature was subnormal. The patient was pale. The pulse was regular, with a rate of about 100 per minute. The heart was not enlarged. In the mitral area there was a short, sharp first sound, followed by a loud, rough systolic murmur, conducted to the axilla. Endocarditis was diagnosed, and the patient was kept in bed. The temperature remained subnormal until the thirty-fifth day, when it rose to 101° F. Slight pyrexia persisted. On the thirty-eighth day the pulse became irregular. owing to each alternate beat being due to a premature contraction. The arrhythmia persisted for two days only. On the fortieth day pericarditis developed, accompanied by arthritis. Death occurred on the forty-fourth day. Post mortem the parietal and visceral layers of the pericardium were completely but loosely adherent by recent fibrinous exudate. When the layers were separated and the exudate was detached numerous small subepicardial hæmorrhages were disclosed. The heart muscle was pale. The cusps of the mitral and tricuspid valves were thickened, and there were some recent vegetations on the mitral valve. The left auricle presented a patch of mural endocarditis. There were a few small patches of atheroma at the commencement of the aorta. Microscopically the left auricle showed thickening of the endocardium, with areas of commencing necrosis; myocarditis; organising pericardial exudate containing a number of irregularly dilated capillaries. The right auricular muscle presented a similar appearance; the endocardium was healthy. The left ventricle showed acute myocarditis of mild degree.

Dr. E. G. L. GOFFE showed a specimen of Pericarditis in Scarlet Fever from a girl aged 9 years. She had been admitted to hospital on Oct. 9th with scarlet fever. There was a previous history of rheumatism. On admission the symptoms of scarlet fever were well marked and there were choreiform movements of the face, right arm, and right leg. On Oct. 26th she developed a pericardial rub at the base and a presystolic and systolic apical bruit. Death took place on Nov. 2nd. The specimen showed the parietal and visceral layers of the pericardium completely covered with recent lymph, small vegetations in the mitral and aortic valves, and some hypertrophy of the myocardium.

Dr. GOFFE also showed a specimen of Perforation of the Arch of the Aorta by a Safety Pin Impacted in the Œsophagus from an infant, aged 10 months, who had been admitted to the North-Eastern Hospital on Feb. 18th, 1912, certified to be suffering from scarlet fever. As the diagnosis of scarlet fever was not confirmed on admission the child was sent to an isolation ward. It was seen again late the same evening, when the nurse reported that it was fretful and had vomited a little milk after each feed. At 12.30 P.M. next day, Feb. 19th, the child vomited after a feed of milk and brought up a quantity of blood and died. The œsophagus, larynx, and trachea with the arch of the aorta and the large vessels arising from it were shown, with a brass safety pin *in situ* as found post mortem. The œsophagus had been opened at the back. The pin was open with the open end downwards. Viewing the œsophagus from behind, the catch half of the pin was seen in the œsophagus; the other half, having passed through the œsophagus point downwards and forwards, was not seen. The pin portion passed to the left of the trachea on a level with its bifurcation. The œsophagus was perforated on its anterior surface about 2 inches from its upper extremity; the pin half having passed completely through the wall of the œsophagus was in a cavity about ¼ inch in diameter between the gullet and the aorta. The walls of the cavity were thickened. Viewing the specimen from the front there was seen a perforation in the wall of the aorta, with the point of the pin just appearing through the hole in the interior of the artery. The aorta was perforated about ½ inch below the origin of the left subclavian. Death was due to hæmorrhage from the aorta owing to ulceration set up in its walls by the presence of the pin in the tissues between the aorta and gullet. The bleeding was into the œsophagus. The stomach was full of blood. There was little blood in the upper part of the small intestines. No blood was found in the large intestines. The heart and blood-vessels were practically empty, and all the tissues were pale and bloodless.

Dr. ERIC PRITCHARD and Dr. C. VIOLET TURNER showed a specimen of Liver Abscess from an infant aged 5 weeks. It had been healthy at birth and jaundiced at 4 days for nearly a fortnight. Its abdomen had always been prominent, but became much more distended five days before admission to hospital. On admission the liver was enlarged down to the umbilicus, and there was œdema of the abdominal walls, back, legs, scrotum, and penis. Death occurred 24 hours after admission. The necropsy showed an abscess of the size of an orange in the right lobe of the liver. No other suppurative focus was found. The pus from the abscess grew bacillus coli and a Gram-negative diplococcus. A culture from the heart's blood grew bacillus coli.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A clinical meeting of this society will be held at the West London Hospital on Friday next, Jan. 15th, at 8 P.M., when cases of wounds caused in the war will be shown and discussed by the President, Mr. Aslett Baldwin, Colonel A. Peterkin (deputy principal medical officer, London district), Lieutenant-Colonel Oliver L. Robinson, Mr. C. C. Choyce, Mr. W. McAdam Eccles, and Mr. H. Tyrrell Gray.

DEATH OF A PROMINENT BATH SURGEON.—Mr. Thomas Davis Ransford, a prominent Bath surgeon, died at his country house in Wiltshire last Sunday, aged 64. The son of the late Surgeon-Major John Ransford, an inspector-general of hospitals, he practised in Bath for a long term of years, and did valuable work at the Royal United Hospital. Resigning in 1909, he was elected consulting surgeon, and has thus been in close association with the institution for nearly a quarter of a century.

Reviews and Notices of Books.

Zoological Philosophy: An Exposition with regard to the Natural History of Animals.

By J. B. LAMARCK. Translated, with an Introduction, by HUGH ELLIOT. London: Macmillan and Co., Limited. 1914. Pp. 410. Price 15*s.* net.

THE "Philosophie Zoologique" of Jean-Baptiste-Pierre-Antoine de Monet de Lamarck (to give the author's full name, which will not be at all familiar to most of us) is one of the great classics of zoology, largely quoted, but mainly quoted at second hand, and seldom read. There is such an immense gulf between the zoology of to-day and that of the beginning of the last century that even the most learned and encyclopædic author, if writing on the results of investigations, hardly finds it necessary to deal with views framed in compulsory ignorance of the quite fundamental data of modern biology. It is, however, by no means uninstructive to realise what a great deal of truth was arrived at by the acute French philosopher which has been perhaps rediscovered in modern times. For example, in comparing living and lifeless bodies, Lamarck writes that no inorganic body possesses individuality—a view which reminds us of the more accurate dictum of the physiologist Verworn, who dwells upon a similarly expressed and important character of living beings; these are, he says, characterised by indivisibility, or rather undividedness, an expression which embodies the same idea in perhaps clearer terms.

In the main, therefore, the republication in an English dress of the famous philosophical work of Lamarck is a matter of historical interest. To those readers who are not fully informed of the chief theories and data of biology Mr. Hugh Elliot's introduction will be of very great service. This editor has not only fully grasped the general purport of Lamarck's thoughts, but is able to elucidate from the modern point of view his statements of fact. Without this introduction the text of Lamarck would be in many places obscure save to the very well-instructed reader. Mr. Elliot places his pen at once upon a common misinterpretation of the "Philosophie Zoologique" by pointing out that that philosophy had two leading contentions. To most persons Lamarck's insistence upon the inheritance of acquired characters, and the gradual heaping up through this of at first infinitesimal variations, which lead under the influence of the environment to the production of new species, represents his philosophical position in the matter of evolution. But this would be an incomplete and thus misleading idea. For Lamarck prefaced this axiom of his belief by the assertion that an innate power of development tending to "proceed in a straight line" is conferred upon all animals. It is the divergencies from this straight line that are due to the environment acting as already stated. To pursue any criticism of Lamarck's position is obviously impossible in a review; nor would it be of great use, if we may rather cynically agree with Tolstoy, that the active life of any theory is no more than ten years. In the last published reflection upon the general problems of evolution Professor Dendy remarked (in addressing the British Association), "Many years of patient work are still needed before we can hope to solve even approximately the problem of organic evolution." To this not

necessarily depressing statement every zoologist will subscribe.

It is most interesting, when revising our knowledge of the general aspect of Lamarck's great contribution to biological theory, to find, as Mr. Elliot points out, that nowhere in the treatise is there a hint that its author had got even the slightest inkling of "Natural Selection." It is occasionally, and even with a desire to depreciate, suggested that Darwin obtained much light from reading the "Philosophie Zoologique." As to theory, that is quite plain; as to fact, it must be borne in mind that Lamarck, writing at that epoch when palæontology was in its infancy, embryology hardly known, and the whole of histology a secret for the future, could hardly be regarded as having accumulated a store of facts for the future delver. Apart from the general purpose of his book, Lamarck dealt necessarily or parenthetically with a vast number of interesting minor points. It was he who first divided the animal world into vertebrates and invertebrates, a division which has lasted for long. It has not, of course, escaped Mr. Elliot that this classificatory generalisation, though "for long time regarded as final," is not now any longer possible; nor has he failed to note that Aristotle's division into "blood-forming" and "bloodless" animals is virtually the division of Lamarck, though based upon a different, and incorrect, structural feature. One of the most singular doctrines incidentally held by Lamarck was that there are virtually no extinct forms; that all creatures evolved continue to live and progress. It is the more singular since it seems to contradict the great writer's fundamental doctrines. For if the environment can profoundly change, it would seem a corollary that it could produce the final change of all and extinguish. But it must be again recalled that palæontology had advanced but a little way in Lamarck's time, while the exploration of the land, and especially of the sea, was only just beginning. Hence the strong possibility, again and again proved to be partially true, that forms hitherto supposed to be missing would eventually be discovered.

We commend the reading of Lamarck's "Zoological Philosophy" to all biologists, for the author's name is in many mouths, while his actual teaching appears to be forgotten. And the wise reader will season his reading with the valuable hints given by Mr. Elliot in his admirable and comprehensive introductory remarks.

Studies Concerning Glycosuria and Diabetes.

By FREDERICK M. ALLEN, A.B., M.D. Harvard University Press. Pp. 1179. Price 38*s.* net.

THIS large work represents three years of research in the Laboratory of Preventive Medicine and Hygiene of the Harvard Medical School. During this time the author has carried out most exhaustive investigations concerning the physiology of sugar and the origin and nature of diabetes, and has produced a satisfactory reproduction of human diabetes in laboratory animals, and experimented with various methods for modifying the disease experimentally produced. In consequence he holds that the cure of diabetes is now a feasible experimental problem. He deals first of all with glycæmia, glycosuria, and glucose tolerance, and details his experiments with carbohydrates in general administered in different ways, and as a result arrives at the conclusion that the presence of long-continued excess of assimilable or non-assimilable sugar in the normal organism does not produce diabetes or any of the symptoms or complications of diabetes which have been attributed to hyperglycæmia. His experiments with injections of dextrose produced chiefly negative results that tended to show that the obesity sometimes associated with diabetes was not due to hyperglycæmia. He has not noted anything like a specific toxic effect of sugar, and has found that the only field of usefulness for dextrose injections was to exert a valuable nutritive and strengthening effect in states of weakness.

The author then deals with the diuretic action of sugar and discusses fully the amboceptor hypothesis. A chapter is devoted to the oat cure, including von Noorden's original views on the matter, and the author touches upon the widely different tendencies of different foods to produce glycosuria without regard to the carbohydrate content of these foods. As a result of the experimental production of operative diabetes on various animals he has reached the conclusion that the normal pancreas is necessary for normal carbohydrate metabolism, in view of one of its internal functions, and he holds that the complications of diabetes, at any rate, such as defective wound-healing and diminished resistance to infection, albuminuria, &c., as far as he observed in diabetic dogs, are not due to the sugar content of the blood or urine. Diabetes insipidus, he suggests, ought to be classed with the disorders of internal secretion.

A most important chapter is on the nervous system in glycosuria, in which the author puts forth the hypothesis that human diabetes is in most cases a functional disease of the nervous system, and holds that the average diabetic patient may have a pancreas which does its normal work if relieved of abnormal influences which interfere with it, though he holds that diabetes is solely and invariably a disease of the pancreas. Such a hypothesis, he thinks, introduces the hope of therapeutic mastery over the disease. Under the heading of "Miscellaneous Therapy" he deals with many lines of treatment.

In Chapter XIX. Dr. Allen discusses the polyglandular doctrine, and, though recognising a certain degree of interaction and interdependence between the different organs of the body, he nevertheless disagrees with the hypothesis that diabetes consists in a loss of balance between antagonistic glands of internal secretion. In a chapter on anatomy he discusses fully the islands of Langerhans, and reproduces at the end of the book many of the histological plates prepared from sections by Dr. F. B. Mallory. He thinks that the weight of evidence tends to confirm the internal secretory function of the islets, the permanent connexion of at least a large proportion of islets with the ducts, and the possibility of new formation of islets in post-embryonic life, but tends to contradict the doctrine of transformations between fully formed acini and islets.

Finally, the author deals with the relations of internal and external secretions of the pancreas and the many experiments that he has carried out on this question, and, in conclusion, he offers a suggestive experimental value of duct ligation in varying the diabetes in dogs, and certainly it appears to have had some good results in these animals. Briefly, he sums up his results as follows: "Allowing for a certain number of purely organic cases, the sequence of causation in the average case of human diabetes is presumed to be the following:

nervous disorder, with impaired function of the islands of Langerhans which leads to a deficiency of pancreatic amboceptor, and this results in glycosuria and other symptoms." He accentuates the fact that a functional disorder must be curable, and if such be established by other observers the existing hopelessness regarding this disease should be removed.

We have been able only briefly to touch upon the scope of this work, and the numerous experiments carried out for so many years well deserve most careful study. But we are convinced that many good and original ideas are here incorporated, and the entire work will serve to advance the study of this disease. There is an appendix of methods, together with protocols of the many experiments, and an extensive bibliography containing nearly 2000 references.

Essentials of Physiology.

By F. A. BAINBRIDGE, M.D. Cantab., D.Sc., Professor of Physiology, University of Durham; and J. ACWORTH MENZIES, M.D. Edin., Lecturer on Physiology, University of Durham College of Medicine. With 134 illustrations, some coloured. London: Longmans, Green, and Co. 1914. Pp. 434. Price 10*s.* 6*d.* net.

THIS publication makes the fourth of the series of "Essentials" issued by the same publishers. In the text there is no indication as to the respective parts contributed by the two authors. As far as possible histological details and descriptions of chemical and experimental methods are excluded. Only the facts and principles of physiology are considered, and in the main great accuracy is shown, as well as judgment in selecting what to notice. But in a future edition we look to see improvements.

After three pages of introductory matter and about ten on the chemistry of the body, the reader passes on to muscle, nerve fibres, the central nervous system, and the organs of sense. In the tracing showing a "simple muscle twitch" the latent period is obviously much too long. It is hardly correct to say that when a muscle passes into rigor mortis it loses its extensibility; nor is it quite accurate to state that "the nerve fibres form the medium by which the various structures of the body are brought into communication with the central nervous system." What about chemical means? In the short statement as to the chief chemical constituents of nerve fibres, water seems to find no place. In describing the conduction of a "disturbance" in a nerve fibre propagated in both directions it might be well to state what kind of a nerve should be used when the galvanometric method is employed. About 70 pages are given to the nervous system, 50 to the organs of sense, and about 20 to blood, and nearly 70 to the vascular mechanism. We are glad to see an account of the arrangement and uses of the "heart-lung preparation" of Knowlton and Starling. Just over 40 pages suffice for the respiratory system. The account of the gases of the blood is concise, as is that of the regulation of the respiratory movements. There are several useful illustrations. Some of Barcroft's recent work on the respiratory function of the blood is incorporated.

The digestive system is dealt with in 50 pages, the subject being introduced by a short account of enzymes. The treatment follows the usual lines. Metabolism comes next, and is set forth in 26 pages, while about five pages are given to animal heat. About nine pages are given to food and diet. We are glad to see that Chittenden's estimate of the protein daily intake is regarded as much too low, so that the actual amount of protein required—about 110 to 120 grammes—is much higher than that taken in his experiments. Vitamines are referred to, and the disease produced in fowls by feeding them with polished rice is also noted, but "polyneuritis" as such is not mentioned; at least, we failed to find it. The introduction of an illustration of this condition in the fowl or pigeon and its cure by yeast would have been useful. It is stated that "gelatine cannot replace other proteins in a dietary." About 20 pages suffice for the urinary system, and of these seven are given to the urine. The authors conclude that the glomeruli simply filter off from the blood a fluid identical in composition with blood plasma, excluding protein, while the tubules, besides secreting certain urinary constituents, exert a selective power of absorption whereby certain substances, such as sodium chloride, can be retained when required. A short account is given of the ductless glands. Seven pages suffice for reproduction. A considerable number of the illustrations are taken from Starling's "Principles of Physiology" and other text-books. In all cases the sources are duly acknowledged.

To us it seems that these "Essentials" are good so far as they go, but being "essentials" the reader must not look for many details. They are intended to meet the requirements of the medical student preparing for a "pass examination." There are very varying standards for a "pass," and for some boards at least it would be well for the candidate to supplement the "essentials" with additional matter from larger text-books.

Boy Life and Labour: the Manufacture of Inefficiency.

By ARNOLD FREEMAN, M.A. With Preface by M. E. SADLER, LL.D., C.B. London: P. S. King and Co. 1914. Pp. 252. Price 3*s.* 6*d.* net.

AN extremely interesting inquiry has been made into the conditions of juvenile employment in Birmingham by Mr. Arnold Freeman, who has recently published his results. Mr. Freeman conducted his investigations at the request of the education committee of the Birmingham city council. His special purpose was to ascertain the causes of deterioration in character and in earning capacity in many boys who fail to pass at once into the higher grades of labour, but escape the special temptations of street trading and casual employment. He selected from the files of the Labour Exchange every boy of 16 to 17 years of age who had been in four or more situations since leaving school. This selection excluded boys of special merit or with favourable opportunities, on the one hand; and on the other, the nomad, or casual, or street arab. Of 134 boys so traced, it was possible to follow up in detail the careers of 71. An outline of these boys' lives is given, and of the influences that are shaping their future.

As Dr. Sadler, the Vice-Chancellor of the University of Leeds, says in his introduction, Mr. Freeman, following Mr. Charles Booth and Mr. Seebohm Rowntree, has gone straight to life; he discloses the actual experiences of a number of boys during their critical years of development. The result is a volume of very great interest; it is not an impression, but a series of photographs, not

always agreeable, sometimes pathetic. Of the 71 boys, 6, after drifting about for three years, found their way into occupations where they learned skilled work or its equivalent; 44 boys were found to be doing unskilled work, and likely to continue in the ranks of unskilled labour; 21 boys were also doing unskilled work, and were so markedly deficient in mental, moral, or physical capacity—sometimes in all three—as to make it exceedingly probable that they would be rejected for regular employment.

The stories of the boys' lives are given in many cases; it is often pitiful reading; the *lacrimæ rerum* are there. Sometimes there are redeeming features, as in the boy whose father had committed suicide through drink, and whose mother earns a pittance by mounting brass knobs at a factory. The boy does odd jobs and is apparently destined to sink into the ranks of unskilled employment, but during the coal strike, "in order to get some coal for his mother, he went down to the canal, dived into the icy water, and fetched up lumps of coal from the bottom piece by piece." The influence of the picture palace in the lives of town children is very great; all boys go to the cinema, generally twice a week. Mr. Freeman considers it as unquestionably "the greatest formative influence at the present time in the life of the average working boy." There is not much of a directly vicious nature in this influence, he thinks—and this accords with all we have heard—the boy is on the whole innocently amused, but it initiates him "prematurely into the adult point of view..... It merely multiplies and intensifies the boy's stock of common-place ideas without enlarging or ennobling them." On the whole this is a more favourable opinion in regard to these shows than we should have expected. The music-hall performance is condemned for boys.

The remedies proposed for the existing evils in boy life and labour are: absolute prohibition of wage-earning, accompanied by whole-time education, up to 15; reduction of hours of juvenile labour between 15 and 18 to a maximum of (say) 30 per week; compulsory continued education, to be insisted on by the State, the details being settled by the local authority. The reduction in hours would "fall most severely on those firms and occupations that make an illegitimate and parasitic use of boy labour"; but everyone will agree with Mr. Freeman in his opinion that "no firm has a right to use a boy for one season only of the year, or for a few years of his life, and then cast him adrift at the expense of the community."

Bedside Hæmatology: an Introduction to the Clinical Study of the So-called Blood Diseases and of Allied Disorders.

By GORDON R. WARD, M.D. Lond. London and Philadelphia: W. B. Saunders Company. 1914. Pp. 394. Price 15*s.* net.

FROM the title of this book we should rather have expected a short manual dealing with the methods of examination of the blood which can be used at the bedside, without the provision of an organised laboratory. It is actually designed on different lines.

After an introductory chapter on classification and one on the general physiology of the blood-forming organs, about nine pages are devoted to methods of examination of the blood. The succeeding chapters deal in turn with the affections of blood-forming tissue, such as chloroma and lymphadenoma; with the various anæmias; with disturbances of the blood pigments, such as hæmochromatosis, hæmoglobinæmia, and so forth; with the varieties of leucocytosis; with chlorosis, hæmorrhagic disorders, and leukanæmia. Three pages are devoted to the study of the blood in surgical diagnosis, and 11 to methods of treatment, including transfusion, X rays, arsenic, and iron. The last chapter contains an alphabetical list of diseases with a brief statement of the conditions of the blood respectively found in them. Parasitic diseases of the blood are specially omitted. There are a good many illustrations, showing both clinical appearances and microscopical specimens. Two coloured plates of cyanotic patients are of very indifferent merit.

The volume does not seem to make any very novel contribution to the subject with which it deals.

Surgery, its Principles and Practice. For Students and Practitioners.

By ASTLEY PASTON COOPER ASHURST, A.B., M.D., F.A.C.S., Instructor in Surgery in the University of Pennsylvania, &c. With 7 coloured plates and 1032 illustrations in the text, mostly original. London: Henry Kimpton. 1914. Pp. 1141. Price 28*s.* net.

THIS is a very successful attempt to provide for the student and practitioner a useful and trustworthy treatise on surgery. It is not too lengthy, and yet it contains practically all that the student should know for most examinations within limitations which are admitted by the author. The author has purposely omitted all reference to the surgery of the eye, the ear, the nose, and the throat. In the preface it is stated that they are "naturally" omitted, though we must confess that we cannot see why these omissions should be "natural," even if convenient. On the whole, we cannot help thinking that it would have been better from the point of view of the student to have included these sections of surgery, for the special text-books on these subjects are generally too lengthy to be easily digested by the student.

We have above used the word successful in speaking of this work, and we are justified in doing so, for the book is clearly written and the author speaks with that amount of dogmatism which is best suited for the instruction of students. It is evidently the product of a capable teacher. The illustrations form a very noteworthy feature of the work, and they are nearly all absolutely original and have been carefully chosen. The coloured plates are especially worthy of mention.

A Text-book of Medical Diagnosis.

By J. M. ANDERS and L. N. BOSTON. Second edition, revised. With 500 illustrations. London and Philadelphia: W. B. Saunders Company. 1914. Pp. 1248. Price 25*s.* net.

THE first edition of Anders's and Boston's massive text-book of medical diagnosis was designed to "present, consistently with a single-volume text-book, the full modern resources of the art and science of medicine as related to medical diagnostics." The second edition, now before us, has taken two years to prepare, and every effort has been made to bring it fully up to date.

The general arrangement is excellent. A brief introductory section is followed by some 135 pages on diseases of the respiratory system. Next the diseases of the circulatory, digestive, and

urinary systems, acute infectious diseases, animal parasitic diseases, and constitutional diseases are discussed; Dr. T. H. Weisenburg at the end of the book contributes 180 pages dealing with diseases of the nervous system. Under the heading of each disorder considered in these groups of diseases, the arrangement of the information given and the deductions to be drawn from it are equally skilful. Admirable use is made of large-type headings and subheadings, in such a way that the reader's attention is directed to the salient points without delay. The text itself is trustworthy, speaking generally. Full weight is given to the laboratory diagnosis of disease as distinguished from its diagnosis by clinical methods and observations, and illustrative cases are quoted where this has been thought advisable. An interesting example of a mode of infection in pulmonary tuberculosis, oddly enough set down under the heading "Heredity," may be quoted: "Seven resident physicians in a hospital in Philadelphia developed pulmonary tuberculosis within the course of two years, and investigations made to ascertain the source of such infection disclosed the fact that the coloured cook who prepared the food for the resident staff was suffering from a chronic form of pulmonary tuberculosis, both his saliva and his nasal secretion showing the presence of tubercle bacilli."

The book is well printed, but the authors are often unfortunate in their spelling of classical words—e.g., "bacillus smegmae" (p. 975) for "smegmatis"; "Parongonimus Westermanni" (p. 79) for "Paragonimus westermani"; "streptothoracosis" (p. 79) probably for "streptotrichosis"; "streptothricosis" (p. 923) for "streptotrichosis." On p. 3 they introduce a new "portmanteau" word, to adopt Lewis Carroll's term—namely, "corollating," apparently a combination of "correlating" and "corollary." The index is excellent, and so are many of the illustrations; it is questionable, however, whether any good purpose is served by the many photographs of nude women employed to illuminate points of pathological and surface anatomy and scattered throughout the text. The book may be recommended to students and practitioners of medicine.

Indispensable Orthopædics.

By F. CALOT. Translated from the sixth French edition by A. H. ROBINSON, M.D. Durh., M.R.C.S. Eng., and LOUIS NICOLE. With 1250 illustrations and 8 plates. London: Baillière, Tindall, and Cox. 1914. Pp. 1175. Price 21*s.* net.

IT is not quite clear to whom this volume is "indispensable." It consists simply of an account of the methods of the author, and is in no sense a textbook of orthopædics either for the student or for the practitioner. It is translated without any attempt to employ English idiom, is diffuse, and by no means easy to read. As a scientific treatise its value is impaired by absence of any consideration of the detailed pathology of the conditions treated, and of any recognition of varieties of disease. For example, there seems to be no differentiation in the author's mind between cases of tuberculous disease of the knee in which there are local foci of disease discoverable in the bones by means of X rays, and cases in which the disease is purely synovial. As might be expected from Dr. Calot, the descriptions of the technique of work with plaster-of-Paris and with celluloid are full and good, and much attention is paid to methods of aspiration of abscesses. It is for these details that the work is useful in England. But the view of treatment taken by the author is very circumscribed, personal methods being repeated again and again, and other methods being mentioned mainly to be criticised. There is a good deal of praise of the results of treatment at Berck in general.

The book is well printed and illustrated; its chief merit, as already stated, lies in the descriptions of the author's methods.

LIBRARY TABLE.

First Book of Physiology and Hygiene. By GERTRUDE D. CATHCART, M.B., B.Sc. Glasg., D.P.H. Camb. With 65 illustrations. London: Macmillan and Co., Limited. 1914. Pp. 158. Price 1*s.* 6*d.* net.—This is an admirable little text-book for the non-professional student, written with great clarity and freedom from unnecessary technicalities, and yet with noteworthy accuracy. The principles of hygiene and their special application to the common matters of everyday life are dealt with in the physiology of the part to which they pertain; there are, however, special chapters on the hygiene of the skin, hair, and teeth, body heat and clothing, muscular exercise, gymnastics, rest and sleep, and micro-organisms. The author has well succeeded in her attempt to give to the manifold facts of physiology and hygiene a more coherent form by grouping them round certain central ideas which make an appeal to the imagination. Each chapter is followed by a selection of questions set at the Oxford and Cambridge Local Examinations. We can heartily commend this book.

Quantitative Analysis by Electrolysis. By ALEXANDER CLASSEN, with the coöperation of H. CLOEREN. Translated from the thoroughly revised fifth German edition by WILLIAM T. HALL. New York: John Wiley and Sons; London: Chapman and Hall. Pp. 308. Price 10*s.* 6*d.* net.—The introduction of electrolytic methods of analysis was due to the authors of this volume, and they have proved to be very valuable to a large body of analytical chemists, but chiefly to those engaged in metallurgical work or in the analysis of metallic salts. The method is not confined, however, to such well-known and easily deposited metals as copper, lead, silver, bismuth, mercury, and zinc, for the list now includes the metals of the alkaline earths, the alkalies, and even the determination of nitric acid in nitrates. Of the greatest assistance in analysis is the electrolytic method applied to the separation of the metals when more than one is present in the solution. The description of this application of the electrolytic method forms a most interesting portion of the work, and more space is devoted to it than any other. The book is a valuable addition to the library of the analyst in general practice.

The Salvarsan Treatment of Syphilis in Private Practice, with some Account of the Modern Methods of Diagnosis. By GEORGE G. S. STOPFORD-TAYLOR, M.D. Durh., M.R.C.S. Eng., and ROBERT WILLIAM MACKENNA, M.A., M.D., B.Ch. Edin., Physicians to the Liverpool Skin Hospital. London: William Heinemann. 1914. Pp. 90. Price 5*s.* net.—The value of salvarsan is almost universally acknowledged, and its use will undoubtedly spread more widely still. This little work gives an account of the method of injecting salvarsan,

and details a number of cases. We do not, however, think that the authors have sufficiently impressed upon their readers the vital importance of extreme care in the administration of the drug if mishaps are to be avoided. Some very striking illustrations are given of syphilitic lesions before and after the injection of salvarsan. Curiously we have not been able to find in the book any reference to neosalvarsan.

First Stage Hygiene. By ROBERT A. LYSTER, M.D., Ch.B. Birm., B.Sc. Lond., D.P.H. Twelfth impression (sixth edition), revised and enlarged. London: W. B. Clive; University Tutorial Press, Limited. 1914. Pp. 288. Price 2*s.* 6*d.* net.—Judging from the issue of a sixth edition the author's plan of taking into consideration the various parts of physiology as essential introductions to certain sections of hygiene has succeeded. In addition, he has preserved a logical sequence of both physiological and hygienic facts, which develops the subject in the most intelligible way. As an example we may mention that after describing the phenomenon of respiration he proceeds with a chapter on ventilation. Similarly the chapter on foods precedes that on the digestive system, and so on through the book. This seems to us to be an eminently sound way of teaching hygienic principles, and particularly in the "first stage."

Prothèse Restauratrice Bucco-faciale et Traitement des Fractures des Maxillaires. By Dr. P. MARTINIER and Dr. G. LEMERLE. With 172 illustrations. Paris: Baillière et Fils. 1915. Pp. 360. Price 3 francs.—This handy volume contains a clear account of the various appliances which the dental practitioner is at times called upon to make or have made, and to adopt. Not only is there an account of the mechanical appliances for treating cleft palate and restoring lost portions of the maxillæ, but details are given of the manufacture of an artificial larynx and the more common methods of replacing a lost nose. There is a full account of the different splints for treating fractures of the jaws, some of the methods suggested for dealing with extensive injuries of the maxilla being extremely ingenious. The illustrations are clear. We can cordially recommend the book to the notice of those interested in the subject.

MISCELLANEOUS VOLUMES.

As might have been expected, the war has had its effect in delaying the appearance of some of the books of reference which usually are published at the close of the year. The following reached us too late to include in our last issue for 1914:—

The Medical Who's Who, 1915. Published annually. London: The London and Counties Press Association, Limited. Pp. 1013. Price 10*s.* 6*d.* net.—This book now contains 1013 pages as against 812 in that for 1914. The names of all those who have filled in and returned the form sent out to every medical practitioner on the Medical Register are included. The book is, however, at present not a complete medical directory, as many members of the medical profession seem to have refrained from filling in the form, under the misapprehension, probably, that the book constitutes a selected, and therefore invidious, list. This we are assured is not the case. On the other hand, the book contains many social and other extra-professional data not to be found in the ordinary medical directory, which confines itself to information having a solely professional value, and our own view is that some of this information serves no good professional purpose.

Some idea of the field of information covered by *Hazell's Annual, 1915* (London: Hazell, Watson, and Viney. Pp. 592. Price 3*s.* 6*d.* net), edited by T. A. Ingram, M.A., LL.D., is indicated by the large and excellent index. The present issue contains many articles dealing with topics of timely and paramount interest. Some 30 pages are devoted to the war, aviation receives a large amount of attention, the Home Rule question is dealt with, and, indeed, on whatever subject information is desired the searcher is sure to find valuable assistance. —— *Whitaker's Almanack, 1915,* by John Whitaker, F.S.A. (London: Whitaker. Pp. 890. Price 2*s.* 6*d.*), is such an old friend that praise of its utility would be almost an impertinence. All the well-known features of this publication are maintained in the new edition, and among fresh matter there are articles on topics connected with, or having a bearing upon, the war. —— *Whitaker's Peerage, Baronetage, Knightage, and Companionage, 1915* (same publishers. Pp. 867. Price 5*s.* net), fulfils all the requirements of an indispensable work for the reference shelf. All the promotions and appointments due immediately to the war have been recorded up to as late a date as the exigencies of "going to press" would allow.—— *Howe's Classified Directory to the Metropolitan Charities for 1915* (London: Longmans, Green, and Co. Pp. 173. Price 1*s*) gives full information of more than 1000 metropolitan charitable institutions, grouped according to classes. An appendix contains a list of provincial charities. It is a useful guide for the benevolent, and we ourselves are grateful for the information which it conveys.

JOURNALS AND MAGAZINES.

The Philippine Journal of Tropical Medicine, Vol. IX., Section B, No. 3.—No fewer than ten original articles appear in this number of the journal, the first being by Dr. Fernando Calderon, who gives some data concerning the Medical Geography of the Philippine Islands. This observer finds that the three preponderating diseases in this region are pulmonary tuberculosis, malaria, and dysentery; after these come beri-beri, intestinal parasites, gastro-enteritis, bronchitis, and broncho-pneumonia. Dr. Otto Schöbl supplies a paper, with illustrations, on the Etiology of Trichomycosis palmellina, a pathological condition of the hair associated with a bacterial infection, found in the Philippines. A contribution to the Bacteriology of Leprosy, with illustrative microphotographs, is made by Dr. John A. Johnston in the form of a preliminary note, in which the author says that at the present stage of his investigation he is quite convinced that the bacillus lepræ is but the acid-fast stage of a markedly pleomorphic streptothrix. Dr. David G. Willets writes on Intestinal Helminthiasis in the Philippine Islands as indicated by examinations of prisoners on admission to the Bilibid prison at Manila; the same author contributes also another short article on Widal reactions among healthy adult Filipinos. Dr. W. A. Musgrave and Dr. A. G. Sison supply a joint paper on Bacillary Dysentery and its Treatment, this being the most prevalent form of the disease in Manila. Experiments on the Cultivation of Rinderpest Virus, in the manner described by Baldrey, are related by Dr. William H. Boynton, of the Veterinary Division of the Manila Bureau of Agriculture, and the same writer also contributes an article, with illustrative plates, on Kidney Worm Infestation of Swine in the Philippines, with special reference to the pathological changes caused by the parasite Stephanurus dentatus, which is often found among the native pigs slaughtered for human food. The worms may be located in the fat surrounding the kidneys, or encysted in the kidneys, liver, spleen, or lymphatic glands. Mr. S. F. Light gives a description of another dangerous jelly fish, Chiropsalmus quadrigatus, found in Philippine waters. Lastly, Dr. R. B. Gibson, of the Department of Physiology of the University of the Philippines, describes some simple laboratory apparatus, with three figures in the text. A series of short reviews of current medical literature completes a very readable and informative number of the journal.

The Dental Record.—The December issue contains an article by Dr. Rayner Eckermann on the Etiology of Dental Caries, in which he raises objections to current ideas and advances an ingenious theory based upon the phenomenon of osmosis. The author considers that caries may be divided into two principal states—primary caries and secondary caries. The former is deep caries, and grows eccentrically from the pulp, the latter is superficial and grows concentrically to the pulp. He maintains that osmosis takes place between the pulp and certain chemical agents dissolved in the saliva which increase the osmotic pressure of

that fluid. The result of this increased osmotic pressure is to "press the blood out of the pulp through the tubules of the dentine up to the enamel. The plasm spreads itself out under the enamel and presses it outwardly." The paper is interesting if not convincing. There are no demonstrations of facts, and some of the author's statements do not tally with unchallenged clinical observations.—The January issue of this journal contains the first instalment of a paper by Mr. J. F. Colyer on the Injuries of the Jaws and Teeth in Animals. The paper is founded on a museum demonstration given at the Royal College of Surgeons last October, and refers to the specimens in that collection. The author describes cases of fracture of the maxilla and the mandible, as well as fractures involving the zygomatic arch. Amongst the latter a description is given of the skull of a bear in which there was a definite bending of the cranium from the unequal balance of muscular action. Cases of complete dislocation of the teeth and several examples of injury to unerupted teeth are fully described. Sir Arbuthnot Lane contributes a paper on the Mechanics of some of the Bones of the Face. He discusses the subject from a general point of view, refers to the relationship of deformed arches to adenoids, and points out the value of early operation in cases of cleft palate. Mr. F. J. Pearce has a practical paper on the Treatment and Filling of Root Canals, and there is a good review of dental surgery in 1914.

The British Dental Journal.—In this journal for Dec. 15th, 1914, Hubert Humphrey recounts experiments he has carried out on the action of the essential oils on gutta-percha. He finds that eucalyptus dissolves gutta-percha, that cinnamon and cajuput have no action, and that oil of cloves leads to an increase in size, accompanied by hardness. He considers that oil of cloves is therefore the best oil to use in conjunction with gutta-percha for filling the root canals of teeth. J. C. Storey contributes an article on Efficiency in Work, and C. Edgar Thomas has a paper on Some Toothache Charms, in which, amongst other interesting details, he states that there is a church at Bonn which possesses a tooth of St. Appollonius, the patron saint of dentistry, and that this relic is exhibited in a glass case on that saint's particular day, devotees kissing the relic as a precaution against toothache.

Bulletin of the International Office of Public Hygiene. Paris: 195, Boulevard Saint Germain.—The monthly bulletin of the International Office of Public Hygiene, we are glad to note, continues to appear in spite of the war. In the list of the governments published in every issue as participating in the work of international organisation for public health purposes the names of Germany and Austria-Hungary do not appear. On the other hand, Turkey has joined. Of the powers of the entente the following are included: Belgium, Great Britain, France, Russia, and Serbia. Our ally Japan is missing; but Japan is a long way off, and her coöperation is certain to be obtained later in effect; in spirit it has been most faithfully given. Some distant countries have joined, such as Chili and Peru, and of course Australia, Canada, and the United States. The *Bulletin* gives frequently news from the countries that do not participate in the international organisation for which it is the official organ. Thus a few months ago Professor Neisser's researches on the contamination of those who nurse typhoid patients were described. These statistics, published in Berlin, set forth that on an average out of 100 persons engaged in nursing typhoid patients three contract the disease. He also affirms that 1 per cent. of the men and 7 per cent. of the women nurses, without showing any symptom of disease, become chronic typhoid carriers. In the German Empire in 1913, according to Professor Neisser, there were at least 70 such germ-carriers, and he urges that there should be a compulsory examination of all who nurse typhoid patients. The reprinting of the Decree dated Paris, Oct. 1st, 1913, and signed by the President of the Republic, on the handling of dirty linen in laundries is wise, for here another subject of first importance in times alike of peace and war is dealt with. Only large steam laundries are under notice; the absurdities of the little private laundries situated in the dirty houses of dirty slums are not regarded as laundry operations. The guiding principle is the absolute separation and disinfection by the process of washing of all the dirty linen before it enters the part of the premises devoted to ironing, sorting, and storing the clean linen. Then we have a circular issued by the French Minister of the Interior, Public Health Department, dated Sept. 25th, 1914, concerning sanitary measures applicable to places inhabited by troops. The first part deals with the purification and storage of drinking water, and the second part the cleansing and disinfection of the premises. The use of the eau de Javel is much recommended, a fact our English medical services on the Continent should not neglect, for it is so popular, can be obtained everywhere, and does not awaken hostile prejudice like carbolic acid. Further, we have the text of a circular issued by the Swiss Federal Government to all the Cantonal governments, dated Sept. 29th, 1914, on measures that are to be taken to prevent the spread of typhoid fever. At that date there was no epidemic, but apprehension was created by the increase of sporadic cases. Therefore practitioners are called upon to be more prompt and careful to notify all cases and to take all the precautions necessary when they merely notice suspicious symptoms and before the presence of the disease is fully confirmed. These are only a few instances showing the practical bearing of the information the *Bulletin* contains; and it is always encouraging to note how sanitary measures are adopted by such a large number of different nations.

THE NEW PHARMACOPŒIA.

THE publication of a new British Pharmacopœia is an event of great importance to the medical profession, not so much by reason of the fact that it discards a certain number of more or less obsolete drugs and gives official sanction to others that were not included in the previous edition, but mainly because it alters the strengths of various commonly prescribed galenical preparations without changing their names. The omissions and additions are, of course, of interest for various reasons, not the least important of which is that they represent the progress that has been made in therapeutic science, and so far as the additions are concerned, set up standards for drugs that had hitherto been unofficial. But from the immediate practical point of view a new Pharmacopœia always needs to be most carefully examined for changes in the potency of its tinctures, extracts, and other compounds. As Sir Dyce Duckworth recently observed, in commenting upon the omission of musk and sarsaparilla from the new Pharmacopœia, "that will not prevent their employment,"[1] while as regards the newly recognised drugs, most of these have been in common use for many years, and will involve little change in medical practice. A general outline of the new Pharmacopœia was given in THE LANCET of Oct. 10th, 1914 (pp. 901 and 907), and we now deal in greater detail with points with which it is essential that medical practitioners should become familiar without delay. Notice of publication, dated Dec. 31st, 1914, appeared in the *London Gazette* of Jan. 1st, 1915, and according to law the new standards and formulæ came into force immediately. Therefore all prescriptions written from the beginning of this year should be dispensed according to the new standards unless the prescriber expressly states otherwise. The actual number of important changes in strengths is not large, but some of the alterations are drastic, and unless special care is taken in prescribing the preparations in question undesirable results may follow.

CHANGES IN POTENCY.

The following are the most noteworthy cases in which the potency of preparations has been changed.

Tincture of strophanthus.—This is four times the strength of the tincture of the 1898 Pharmacopœia; the official dose has been reduced to one-third. The alteration in strength has given rise to much criticism, the object of the change presumably being to bring the tincture approximately to the strength laid down in the International Agreement. The tincture of the Pharmacopœia of 1885 was double the strength of the 1898 tincture, and therefore half the strength of the 1914 tincture. It would be advisable for practitioners—for a few months at any rate—in prescribing tincture of strophanthus to indicate clearly whether they mean the tincture of 1898 or that of 1914. If "tincture of strophanthus" without any qualification is written the

[1] THE LANCET, Nov. 28th, 1914, p. 1235.

pharmacist will be expected to dispense the new tincture, and it would remove any doubt the dispenser might have if the prescriber were to write "tinct. strophanth. 1914."

Tincture of opium.—This has been increased in strength by about 33 per cent. The tincture of the 1898 Pharmacopœia was standardised to contain 0·75 per cent. of morphine, but the new tincture contains 1 per cent. and is approximately the same strength as the tincture of the International Agreement. In prescribing it would be advisable to indicate that the 1914 tincture is intended. Incidentally it may be noted that as the new tincture contains 1 per cent. of morphine it is within Part I. of the Schedule of Poisons, and may only be sold by retail to persons known or introduced to the seller and on condition that an entry of the transaction is made in the poison book. The old laudanum was in Part II. of the Schedule of Poisons. Compound tincture of camphor (paregoric) contains one-tenth more morphine than was contained in the corresponding preparation of the British Pharmacopœia, 1898. Liniment of opium has been increased in the strength of its morphine content.

Tincture of aconite.—This is about twice as strong as the corresponding preparation of the 1898 Pharmacopœia, and approximately the same strength as the tincture of aconite of the International Agreement. Prescribers should indicate the date of the Pharmacopœia.

Vinegar of squill and vinegar of urginea.—Both these are approximately twice as strong as the old preparations.

Spirit of juniper.—This is twice as strong as the old preparation.

Syrup of chloral.—This is nearly 10 per cent. stronger than the old preparation; 1 fluid drachm contains 10·9 grains of chloral hydrate.

Syrup of codeine phosphate.—This has been increased in strength by 9 per cent.; 1 fluid drachm contains 0·27 grain of codeine phosphate.

Calomel ointment.—This is twice the strength of the corresponding preparation of 1898.

Tincture of nux vomica.—This is about half as strong as the old tincture; 1 fluid drachm contains about one-sixteenth of a grain of strychnine.

Tincture of colchicum.—This is one-half the strength of the old tincture.

Tincture of digitalis.—This is four-fifths the strength of the old tincture.

Ammoniated tincture of opium.—This contains approximately one-tenth less morphine than that contained in the corresponding preparation of the 1898 Pharmacopœia.

Tincture of belladonna.—This contains seven-tenths of the proportion of alkaloids contained in the 1898 tincture; it is standardised to contain 0·035 per cent. of total alkaloid.

Tincture of picrorhiza.—This is twice the strength of the corresponding preparation of the Indian and Colonial Addendum, 1900.

Belladonna plaster.—This is one-half the strength of the old preparation.

Hypodermic injection of cocaine.—This is one-half the strength of the old preparation; 110 minims contain 5 grains of cocaine hydrochloride.

Hypodermic injection of morphine.—This is one-half the strength of the old preparation; 110 minims contain 2·5 grains of morphine tartrate.

Phosphorus pill.—This contains 1 per cent. of phosphorus and is one-half the strength of the old preparation.

Phenol lozenges.—These are one-half the strength of the old; each lozenge contains approximately half a grain of carbolic acid.

Phenol ointment.—This has been reduced in strength by 25 per cent.; it contains 3 per cent. of carbolic acid.

Ammoniated mercury ointment.—This is approximately one-half the strength of the old preparation.

Compound mercury ointment.—This is approximately three-fifths the strength of the old preparation.

Mercury ointment.—This is approximately three-fifths the strength of the corresponding preparation of the 1898 Pharmacopœia.

Liniment of mercury.—This contains approximately three-fifths of the proportion of mercury contained in the old preparation.

Solution of mercuric chloride.—This has been reduced in strength from 1 in 875 to 1 in 1000.

Solution of potash.—This is nearly 20 per cent. weaker.

Syrup of ferrous iodide.—This is approximately two-thirds the strength of the corresponding preparation of 1898; one fluid drachm contains 3·75 grains of ferrous iodide.

Tablets of nitroglycerine.—These have been reduced in strength; each tablet contains approximately 1/130th grain of the trinitroglycerine of commerce.

Dilute nitric, phosphoric, and sulphuric acids have all been decreased in strength.

OTHER POINTS.

The above represent most of the noteworthy changes in the strengths of preparations. Many of them have been made in order that the compounds may comply with the recommendations of the International Conference respecting the unification of the formulæ for potent drugs and preparations in the several national pharmacopœias. Alterations, for the most part slight, have been made in the composition of various articles. For instance, the saffron has been omitted from compound decoction of aloes; salicylic acid has been omitted from solution of atropine sulphate; the syrup in compound mixture of iron has been replaced by glucose and a small quantity of powdered acacia added; in compound tincture of cardamoms the raisins have been replaced by glycerine; from compound tincture of cinchona the saffron has been omitted; in compound tincture of senna the raisins have been replaced by glycerine.

For the most part the changes in nomenclature are not likely to give rise to many difficulties. It is interesting to note, however, that liquor iodi fortis (strong solution of iodine) has been replaced by tinctura iodi fortis (strong tincture of iodine). Tinctura iodi is replaced by tinctura iodi mitis (weak tincture of iodine). The strong tincture of iodine of the new Pharmacopœia contains approximately the same proportion of iodine as the strong solution of the old, and the weak tincture of iodine contains the same proportion of iodine as the tincture of iodine of the 1898 Pharmacopœia. It is important that prescribers should note this change in nomenclature, and indicate definitely whether they require the strong or the weak tincture to be dispensed. "Tinctura iodi" by itself might leave the dispenser in doubt as to which tincture was intended. Practically all the drugs that have been added are already familiar to medical men, and the more important of these drugs were detailed in the article which appeared in THE LANCET of Oct. 10th, 1914, p. 907.

THE PUBLIC HEALTH OF DUBLIN.

THE annual report for 1913 on the state of public health in Dublin has recently been issued by the superintendent medical officer of health, Sir Charles Cameron. So much attention has been directed to the sanitary condition of Dublin within the past 12 months that the present volume may find more readers than most of the series.

The population of Dublin in the middle of 1913 was estimated to be 308,187, and the density was 39 persons per acre. The actual density in the inhabited area is really much greater, as the city boundaries include large stretches of pastoral land. Some of the information given is not easy to understand, and contradictory statements occur. For instance, we are told (p. 18) that the "number of persons residing in single-room tenements" is 21,133. It appears from a table on the next page that this is the number of single-room tenements, and the number of persons, as stated in the report of the Departmental Committee on Housing Conditions in Dublin[1] is 73,973. Again, in discussing the deaths from typhoid fever, it is said that the number in 1913—viz., 33—is the smallest on record except in 1910, when 32 occurred. A table on the next page shows that in 1912 there were only 30 deaths. Again, a statement concerning the death-rate from infectious diseases (p. 36) is copied without correction from the previous report. Slovenliness of this kind makes it difficult to arrive at the facts.

The birth-rate for the year was 31 per 1000 of the population, whereas in the suburbs it was only 17 per 1000. The birth-rate in the city shows little or no tendency to decrease. The death-rate for the year was 21·3 per 1000, and in the suburbs it was 16·1 per 1000. Of the deaths in the Dublin

[1] THE LANCET, Feb. 28th, 1914, pp. 623, 640.

registration area 42·6 per cent. occurred in the various workhouses, hospitals, asylums, and prisons.

The death-rate from the principal infective diseases, 2·4 per 1000, was the same as in the previous year. No death from small-pox has occurred in Dublin since 1904. There were 11 deaths from typhus fever, the average for the previous ten years being 3. The number of deaths due to diarrhœal diseases and enteritis of children under 2 years of age was 470, being more than double that of the previous year. The high incidence of these diseases is in part due to the long, hot summer of 1913, and in part to the distress arising out of the labour disturbances in the city. The infantile death-rate for the year was 154 per 1000 births, as against 140 in the previous year.

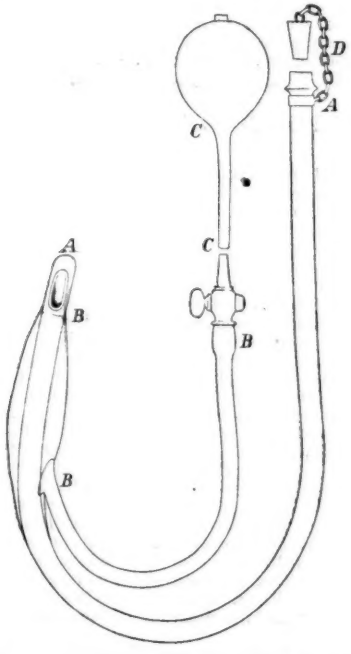
The deaths due to tuberculosis numbered 1132, of which 839 were from phthisis. The total is less by 157 than the average for the previous five years. The tuberculosis dispensary in Charles-street came into the possession of the corporation at the end of 1912. In 1913, 1559 patients were treated, the number of attendances at the dispensary being 10,533. 54 per cent. of the patients were males. A little more than half were insured under the National Health Insurance Act.

Sir Charles Cameron publishes as an appendix his reply to the report of the Departmental Committee on Housing Conditions in Dublin. Notice of it has already been taken in THE LANCET.

New Inventions.

AN OBTURATING CATHETER.

I WAS consulted about some bronchial affection in the case of a man, 83 years of age, who, as the result of an unsuccessful attempt at a suprapubic prostatectomy, bore an opening from the skin into the bladder, from which the continual dribble of urine made him most uncomfortable.



As the several mechanical appliances which had been tried had failed to stop the leakage I designed a catheter which completely answered its purpose and kept him dry both night and day. The instrument is an ordinary elastic coudé No. 10, A A, fitted with from ½ inch below the eye to about 3 inches of its length with an air-bag B, B, B, which at its end has a stop-cock and a detachable bulb, C, C, for inflation. After passing it through a small inflated ring and introducing it into the bladder it is fastened to the body by means of a waistband in the manner of a truss. The air-bag is then inflated to the extent required completely to occlude the opening. At the other end of A is a plug, D, which is attached to it by a small chain, and can be easily withdrawn for micturition. The patient, however, for whom the instrument was intended was so intolerant of the slightest accumulation of urine in his bladder that he preferred to connect it with an ordinary urinal when he went out in his bath chair or driving.

Wimpole-street, W. J. B. BERKART, M.D.

INTRATRACHEAL ETHER ANÆSTHESIA.

THE method of giving open ether with a Schimmelbusch mask has been attacked on the score of pulmonary complications which are alleged to follow. All who use this method are familiar with the frozen dew which collects on the outside of the mask, and it is difficult to believe that breathing air at such a low temperature does not in a certain number of cases prejudice the after results. To obviate this I have devised an apparatus for giving hot ether vapour which I have used most satisfactorily both as regards immediate anæsthesia and after-effects. The apparatus (see Fig.) consists of a thick glass test-tube fitted with a rubber cork, through which pass a glass outlet tube and two terminal connexions. The terminals are connected to a U-shaped spiral resistance wire which reaches to the bottom of the test-tube. The current can be used direct from an ordinary cautery plug. The passage of the current through the wire boils the ether, which passes off through the outlet tube to the patient, the quantity being regulated by the strength of current and length of wire. With a given current and a given resistance the amount of ether evaporated in a unit of time can be readily estimated. In practice it is found that the ether vapour reaches the patient at a higher temperature than its boiling point owing to the space above the ether becoming heated by the naked wire. In using the apparatus I have passed the ether vapour through a rubber tube and fixed the end under a Schimmelbusch mask. The subject of intratracheal ether anæsthesia has recently attracted considerable attention, which has prompted me to bring to notice the above method which ensures in the simplest possible manner the two conditions essential to intratracheal technique, these being warm vapour deliverable at a constant pressure. In cases where active ventilation of the lungs is desired a stream of warm oxygen can be easily added by means of a T-shaped connexion fitted to the delivery tube.

H. L. C. NOEL, M.R.C.S. Eng.,
L.R.C.P. Lond.,
Rothesay. Late Resident Anæsthetist, London Hospital.

DUBLIN JOINT HOSPITAL BOARD.—The management of the Dublin Joint Hospital Board has come in for a very severe report from the Local Government Board auditor. This body, made up of representatives of the Dublin corporation and various local authorities in the county Dublin, is the governing body of Crooksling Sanatorium. The auditor found it difficult to complete his audit for 1913 owing to the condition of the books. As regards dates, there were great discrepancies between the books and the findings of the stocktaker, showing either very careless bookkeeping or considerable wastage of stock. The provision account contained numerous errors. The subsidiary bank account was considerably overdrawn, and the contributing bodies had not paid their full contributions.

THE LANCET.

LONDON: SATURDAY, JANUARY 9, 1915.

The British Pharmacopœia, 1914.

THE receipt of an advance copy of the British Pharmacopœia enabled us[1] to give some indication of the chief changes which would come into force when the new volume was authoritatively published. The actual date of appearance was, however, left uncertain at the time, and now that the publication has been gazetted medical men and pharmacists must all be grateful for the consideration shown by the General Medical Council in keeping back the volume to the latest possible moment. There can be no doubt that the introduction of a new pharmacopœia is always associated with some inconvenience, both to the medical profession, who have to become acquainted with changes which may affect prescribing, and to pharmacists, who are obliged to revise their stock in accordance with the new standard. These difficulties are greatly increased while the nation is at war. Apart from a natural disinclination to be troubled with a fresh source of anxiety, there is, in many instances, the impossibility of obtaining from abroad many of the drugs necessitated by the directions of the new Pharmacopœia. The declaration of war found the General Medical Council fully prepared to deal sympathetically with these difficulties. In the absence of the President on the continent, Dr. NESTOR TIRARD, the medical editor, represented to the Executive Committee the grave inconvenience the public services and manufacturers would incur through the early publication of the new Pharmacopœia, with the result that the statutory notice of publication in the official gazettes was postponed from Oct. 9th to Dec. 31st. Thus three months have been allowed to elapse between the exhibition of advance copies and the time of publication, during which period many reviews in technical journals have enabled manufacturers and others to make ready. Our advertisement columns show that this time has been adequate for the production of new editions of text-books; it is to be feared, however, that in some directions manufacturers may still find difficulty in meeting the requirements of the new standard, but no serious trouble should arise so long as care is shown in indicating when articles conforming to the Pharmacopœia of 1898 are necessarily employed in place of those of 1914.

On comparing the published volume with the advance copy it is found that the editors have made full use of the opportunity afforded by the delay in publication; they have introduced numerous minor alterations, especially in footnotes, which add to the uniformity and utility of the book as a work of reference; they have also been able to profit by criticisms which have drawn attention to certain elusive misprints which had escaped observation. While minor blemishes have thus been removed, the main facts persist, essentially as in the advance copy. Reviewing the criticisms which have hitherto been published, exception has been taken to some of the synonyms, to the introduction of the metric system, and to a list of abbreviated Latin names of official drugs and preparations which has been adopted in the index. The synonym which appears to have caused the greatest uneasiness, if not dismay, is the retention of the term "laudanum" as the equivalent of tinctura opii. To conform with recent foreign pharmacopœias this tincture has been made about one-third stronger than before, thus bringing the sale to the public under restrictions which may be irksome to the retail vendor. Numerous letters of protest have been published on this subject in the trade journals, but if the recorded sales are to be believed it would certainly appear to be high time to introduce some check upon the supply of laudanum to the public. Apart from trade considerations, however, the alteration in the strength of tincture of opium is one which should early be recognised by all who prescribe or dispense this preparation. The introduction of the metric system has already caused some unrest amongst medical practitioners, who fear it is too late for them to learn to prescribe in a new fashion. This modest distrust is quite unnecessary, since in the preface of the Pharmacopœia nothing can be more clearly stated than that the use of the metric system is primarily intended for pharmaceutical and analytical computations, and that practitioners are at liberty to employ either the metric or imperial system for prescribing purposes. It is necessary, however, to call attention to the fact that the relation between metric and imperial doses is given in approximate equivalents. It is perfectly clear from the wording of the preface that at the next revision the imperial system will probably be omitted, and it therefore becomes important that the rising generation of medical men should become familiar with the use of the metric system in prescribing, as well as in physiological, pathological, and other laboratory work. The adoption of the metric system is not only more scientific, but it is also more in accord with the custom adopted in other pharmacopœias.

In our leading article on the advance copy reference was made to the above-mentioned list of abbreviations, which has furnished many critics with scope for levity. It should be noticed that these abbreviations are not authoritatively enjoined; they do not form part of the monographs which constitute the Pharmacopœia. The idea of some authoritative guidance is very welcome,

[1] THE LANCET, Oct. 10th, 1914, pp. 901 and 907.

since it is desirable that some consistency should be shown in the methods of abbreviation. Many readers will call to mind abbreviations which seem to be almost hallowed by custom—for example: mag. sulph. or pot. iod.; these are employed so frequently that it would seem impossible to question the intention ot the prescriber, and yet both of these may be misread. Quite recently serious results followed from the use of barium sulphide where sulphate had been intended, under the abbreviation "sulph." It is desirable that abbreviations, if used, should be as short as possible, consistently with clear indication of the meaning. It is understood that similar abbreviations are likely to be included in the next issue of the Pharmacopœia of the United States, and there can be little doubt that great convenience would result from the universal adoption of a recognised series of abbreviated titles. Many misapprehensions and misunderstandings might be removed by careful study of the preface, which clearly defines the scope and intention of the principal changes that have been adopted. In the preface it will be found interesting also to note the acknowledgments of assistance received by the Pharmacopœia Committee of the General Medical Council. It is evident that the task of revision was commenced almost immediately after the publication of the Pharmacopœia of 1898, and that this revision has been undertaken by many who unfortunately are not with us to welcome the new volume. Of pharmacists, the late Mr. CHARLES EKIN and Mr. K. J. DOWNES may be mentioned, while from the long list of those who have served on the Pharmacopœia Committee since 1898 the Revising Committee undoubtedly received untold help from the labours of the late Mr. TICHBORNE and Dr. LEECH. It is, we believe, an open secret that Dr. LEECH advised the *rapprochement* with pharmacists which led to the Pharmaceutical Conference, which in time gave place to the Committee of Reference in Pharmacy.

The Physical Condition of School Children.[1]

THE Annual Report for 1913 of the Chief Medical Officer to the Board of Education, Sir GEORGE NEWMAN, makes its appearance at the close of 1914, and it may be explained that these dates are not mentioned with intent to imply that the publication is belated. First, the report, although dated as referring only to 1913, covers a year ending on March 31st, 1914; and, secondly, the Chief Medical Officer takes into account in his summary the reports of all the school medical officers in the country. There are over 300 areas for Elementary Education in England and Wales, each with a principal school medical officer, and in 295 of these areas schemes of medical inspection have been approved, so that even if all the local reports reach the Board of Education with punctuality—which is not the case—there is a great work of sifting and collating to be done before any comprehensive lessons can be derived from the mass of material. That punctuality is not always observed in the matter of local reports is indicated by the fact that this year the Chief Medical Officer issues a special request that these documents should be sent in as soon as possible, and not later than the end of March. The general spirit of the report is optimistic, and we commend its perusal to all those people who, when the first results of school inspection began to arrive, deafened us with plaints about the decay of the race. Circumstances in the war now raging may have caused some of these doleful prophets to reconsider their opinions, and this report should prepare many others of them to follow suit, for its whole story is one of quiet progress. Nor is the story, though in a Blue Book, hard to follow. Sir GEORGE NEWMAN has the gift of packing an enormous amount of information into a reasonably sized volume and of arranging his material in accordance with a logical plan. These things make it easy to obtain the facts, to realise their importance, and to appreciate at the proper value their bearing and the fairness of the official estimate. For in this record of the work carried on by the local education authorities of England and Wales, mainly in the field of school hygiene, while along some lines little more than a summary has been given of achievement, along others some clear and pregnant observations provide the public as well as the medical profession with exactly the sort of general principles which should assist in a mutual development of education as a great health factor. It becomes plain that the State machinery to this end is working smoothly, and, if slowly, yet surely.

The two sections of the report possessing the greatest general interest are that which deals with education in relation to infant welfare, and that which deals with the physical condition of school children. These matters claim at the present moment more than ever our close attention. As Sir GEORGE NEWMAN says, "In no direction are the ravages of war more serious or more difficult to replace than in the loss of human lives. Whatever degree of success may attend the nation in the present European war, the cost in life must inevitably be heavy. Consequently, the question of the preservation of the rising generation, and care for its physical fitness and equipment, is of more than ordinary importance." The physical condition of our school children we can all see to be to-day a matter of paramount importance—may we be forgiven as a nation for not having seen it in times of peace. It is here considered as it may be influenced by age, sex, urban and rural conditions, and by a combination of these factors; and throughout the report the determination is shown to regard education as a link between heredity and environment. To measure duly the

[1] Annual Report for 1913 of the Chief Medical Officer of the Board of Education. London: Eyre and Spottiswoode, Limited. Price 1s. 8d.

inter-relation of the care of the individual with the care of his environment is shown to be a necessity in educating the young, and for work in this direction to be of real value it must be founded on facts observed and collated. The very natural criticism suggests itself that the result of the inspection of school children, unless most carefully made and on some more or less uniform plan, may result in masses of statistical findings having no common points of comparison, and furnishing therefore little opportunity for deriving from the figures indications for practical advance. The Chief Medical Officer, with a proper feeling that work done should have its executive outcome, suggests to school medical officers how they can best assist the Board to a comparative study of the data which they obtain, in a way which will not arise from mere records, however complete, of defect and disease. He asks them to make a systematic and comparative study in their education areas in regard to the following five points: the presence and distribution of disease in childhood; its causes and the conditions favourable to its production; the effects and sequelæ of such diseases and defects; the means of treatment and their results; and the means and methods of prevention; and in an appendix to the report specimen tables are printed as indications to school medical officers how to keep their records with a view to securing uniformity. If the indications are faithfully followed, the accumulated records will have a living value, and may help in the interpretation of many obscure points in sociology.

Discussing the influence of age and sex upon the physical condition of childhood, Sir GEORGE NEWMAN institutes a comparative study, admitting that the classification is arbitrary rather than scientific, between "entrants" and "leavers." When we look at the figures respecting London we have at once the sad circumstance revealed to us that during the period of school the general physique of children does not tend to improve. Thus, in London, "entrant" boys show 10·8 and girls 9·8 per cent. of poor and bad nutrition, while of "leavers" no less than 14·7 per cent. boys and 14·3 girls show the same conditions. These figures are supplemented by others dealing with different districts in London, and here the size of London stands us in good stead—as a rule that size prevents the discussion of any social problem—because we are able to consider very large populations, equivalent to populations in first-class cities both at home and abroad, who can be classified as belonging to groups of districts where the standards of comfort and well-being are markedly different. Taking Bermondsey as an extreme example of a district where deterioration of physical condition takes place during school life we find that of the "entrant" boys and girls 5·6 and 5·0 per cent. respectively show poor and bad nutrition, while among "leavers" in Bermondsey 28·5 per cent. boys and 29·6 girls display these defects. This is a serious indictment of the environment which Bermondsey is able to provide for its childhood, for the percentage of poor material at the beginning is not excessive. In Hammersmith the figures of the "entrants" showing poor and bad nutrition are for boys 5·6 per cent., and for girls also 5·6, while among "leavers" the figures have been transformed for boys to 7·0 per cent. and for girls to 12·0, showing the same defects. Another borough, which is considered in the same group as Hammersmith, is Holborn, where 5·7 per cent. of the boys and 4·4 per cent. of the girls show poor and bad nutrition as "entrants," while of the "leavers" 14·0 per cent. of the boys and 8·8 per cent. of the girls show the same defects. We have not selected these figures arbitrarily for comparison, but only to show how information obtained methodically and on a uniform pattern cannot fail to be valuable. There must be some underlying reason for the fact that the school age has such an ill-effect on the girls in Hammersmith and on the boys in Holborn. The influence of sex in London as a whole appears to be slightly to the advantage of girls, inasmuch as 10·8 per cent. of "entrant" boys and 14·7 of "leaver" boys are reported deficient in nutrition, as compared with 9·8 per cent. of "entrant" and 14·3 per cent. of "leaver" girls. Mr. F. E. FREMANTLE, the medical officer of health of Hertfordshire, in his annual report supplies, however, some figures which give interesting exceptions to the London finding. His figures show that at the ages of 5, 7, and 12 years girls are invariably worse off than boys. At 5 years the percentages of defect for boys and girls respectively are 2·5 and 2·6, at 7 5·1 and 5·4, and at 12 7·0 and 8·1. A similar finding is recorded in the rural areas of Bedfordshire, though the standard of poorness of nutrition is more severe than in Hertfordshire, the percentages being 23·7 for boys and 25·1 for girls. Among purely urban areas the return for Bilston shows the alarming proportion of 63 per cent. of senior girls "below normal or bad," as compared with 38·42 per cent. of senior boys. Statistics systematically gathered and intelligently read may give us the clue to these obscure discrepancies.

In one important direction Sir GEORGE NEWMAN'S report, transgressing his own limitations of date, deals with matters of present moment. The section referring to the provision of meals for children attending public elementary schools takes notice of the situation as recently as after the outbreak of the war. It will be remembered that the Education (Provision of Meals) Act, 1914, was read for the third time on August 4th, 1914, receiving the Royal Assent three days later, so that the new legislation arrived exactly when responsibilities of a far-reaching sort were certain to be thrust upon the authorities. That the dislocation of trade following upon the war would lead to an increase of distress among the poorer classes of children was inevitable, and on the date on which the Act come into force the Board of Education issued a circular letter to all the authorities under its jurisdiction, urging them to make

preparations to deal with subsequent trouble. On August 15th the Board issued a memorandum on the methods to be adopted in providing meals for children at public elementary schools, advising dietaries suitable to the circumstances. It is too early to say what effect the thoughtful and even elaborate counsels given in the memorandum have assisted the local authorities in dealing with the situation, but there is no doubt that much has been done to grapple with it. There is machinery now in every educational area for feeding all the school children if necessary, but Sir GEORGE NEWMAN'S analyses of the number of children fed and of the number of meals provided show that a great deal remains to be done. He reviews all the activities of the authorities in the matter of providing meals for their charges between the year 1906, when the first Act of Parliament for providing meals for children attending public elementary schools was passed, and the present day, and points out that this manifold experience has not yet supplied any satisfactory method for selecting the children to be assisted. To mention only one difficulty, the educational authorities have power to recover the cost of meals from parents who are not necessitous, while there is no obligation on the parents to send their children to receive the meals, even though the children have been recommended by the school medical officers as ill-nourished subjects who should receive better food. What is to stop the unfortunate child being prevented by the parents from attending the free meals? The whole of this section of Sir GEORGE NEWMAN'S report deserves anxious attention, and, indeed, it should all be read, and always from the point of view that in a scheme of State education scientifically conducted our rulers have an opportunity of mitigating at the same time the evils of heredity and the evils of environment.

Annotations.

"Ne quid nimis."

MEDICAL PRECAUTIONS IN CASE OF AIR RAIDS.

THE probability of shells falling on unfortified coast towns is now obvious to all. That bombs may possibly be dropped upon London is clearly present to the minds of the authorities, as is shown by the official announcement in the daily papers telling the general population what to do in the circumstances. These instructions may be useful for the doctors' families, as for the families of any other citizens. But the medical men themselves in the neighbourhood of such a catastrophe know that they have an active duty to perform for their fellow-citizens and their country. If the reports as to the size, number, and high explosive character of the Zeppelin bombs are approximately correct, the number of the casualties might be in London far in excess of those which have occurred in less densely populated towns like Antwerp. And the wounds would be of a very different character from those with which the police have to deal in ordinary street accidents. We hear that arrangements are being made, with the full approval of the police, for the speedy despatch of a number of surgeons to the spot in the event of the terrible emergency. It may reasonably be hoped that the Zeppelin ships will not succeed in reaching London itself, but it is well to be forearmed, and it is certain that if they did, the most special police regulations would be subjected to a severe test. Local medical men would then be of great assistance. All medical men are therefore urged to see that their professional cases or bags are well stocked, and especially that a hypodermic syringe, a tourniquet, some dry dressings, and some bandages are not missing. Then, while their wives and children seek shelter, they should go to the spot of which they will be advised and quietly set to work, in harmony with the police, to render such first aid as may be essential before the wounded are removed to the hospitals or other institutions which, by previous arrangement, will be prepared to receive them, and to which the police will see that they are transported as expeditiously as possible. The scheme of preparation has been carefully thought out; it is not the expression of an unreasonable sense of scare, and must not be interpreted by the public as such. It represents the desire and intention of the medical profession, in the face of a disaster which may arrive, to meet its terrors and minimise its effects.

THE NEW YEAR HONOURS.

AMONG the new Privy Councillors is the name of a medical man, Sir William MacGregor, G.C.M.G., C.B., who recently retired from the governorship of Queensland. He has held a similar position in various parts of the British Empire, and was at one time Government medical officer in the Seychelles and chief medical officer for Fiji. Dr. Herbert Lethington Maitland, of Sydney, has been made a Knight Bachelor; Major Samuel Rickard Christophers, I.M.S., officer in charge of the Malaria Bureau at the Central Research Institute, Kasauli, and Colonel George William Patrick Dennys, I.M.S., Inspector-General of Civil Hospitals in the Central Provinces and a member of the Council of the Chief Commissioner for making laws and regulations, have been made C.I.E.'s; and Mr. John Marnoch, Regius professor of surgery in the University of Aberdeen, has been made a C.V.O. The recipients of the Kaisar-i-Hind gold medal include Major James Husband, I.M.S., civil surgeon at Wana, N.W.F. Province; and Dr. Charles Albert Bentley, special officer under the Sanitary Commissioner of Bengal. In the new Order of the Military Cross for distinguished and meritorious service awards have been made to Captain H. Stewart, R.A.M.C., Captain E. D. Caddell, R.A.M.C., Lieutenant C. Helm, R.A.M.C., Lieutenant (temporary) E. J. Wyler, R.A.M.C., Captain J. F. Murphy, R.A.M.C., Special Reserve, and Captain Kanwar Indarjit Singh, I.M.S. In the same honours list it is announced that the Indian Order of Merit of the Second Class has been conferred on Senior Sub-Assistant Surgeon Pandit Shanker Dass (attached) "for cool courage in attending wounded under heavy fire at Neuve Chapelle." To all these colleagues, whose names are thus added to those whose distinctions we have chronicled from week to week during the conduct of the war, we offer in the name of the

medical profession our hearty congratulations. At the same time we note with pleasure that Dr. J. Dobbie, F.R.S., who acted most efficiently as a scientific referee in chemistry for the new British Pharmacopœia, and Mr. Perceval Alleyn Nairne, chairman of the committee of the London School of Tropical Medicine, have received the honour of knighthood, and that the Earl of Aberdeen has received the dignity of a marquisate. The good work which both Lord and Lady Aberdeen have done in regard to the prevention of tuberculosis is well known to all our readers.

EPIDEMIC POLIOMYELITIS AT WEST KIRBY.

ELSEWHERE in this week's issue we publish a short record by Dr. George Jubb of a small epidemic of acute poliomyelitis at Hoylake and West Kirby, the chief interest of which lies in the fact that for three years in succession small epidemics have occurred in these localities. The paucity of the actual number of cases renders the drawing of any definite conclusions somewhat hazardous. It may be remarked, however, that the general hygiene of these seaside resorts leaves nothing to be desired, and Dr. Jubb has been able to elicit only one fact of possible etiological significance—viz., that all the Hoylake cases had a common milk-supply. It has been shown in many previous epidemics that the milk-supply is not a factor on which any weight can be laid; nevertheless, in view of our ignorance of how the virus spreads, it is well not to overlook any possibility of this sort; indeed, minor epidemics may furnish data uncomplicated by other and confusing features. Dr, Jubb is not in a position to demonstrate any connexion between the milk-supply and the disease, but merely records the fact. Greater importance should be attached to his remark that the father of the first patient of last summer's epidemic is a medical practitioner who attended two of the cases of 1913. Flexner and his collaborators have shown that the virus of poliomyelitis may remain in an active state in the nasal mucosa of individuals who have not themselves suffered from the disease, but who have been in the company of affected patients. In one case they were able successfully to inoculate an ape from the washings of the nasal mucosa of the parents of a case whose attack had occurred nine months previously. Netter has observed the same phenomenon in some of the French cases of two years ago. The fact that the virus may be kept alive by otherwise normal carriers is therefore demonstrated, and Dr. Jubb's surmise that in this fashion the West Kirby epidemic recommenced is probably correct. It is curious that his four cases are all males, and it would be interesting to know what is the sex of the other members of the families that have remained unaffected, though presumably in contact with the infected patients. Dr. Jubb is not inclined to attach importance to the possibility of the virus being spread by the agency of flies of the house, stable, or other variety. Experimental work with the stable fly, stomoxys calcitrans, has been distinctly inconclusive. Whether the sand flea can be incriminated is doubtful. Observers have frequently been struck by the occurrence of cases of poliomyelitis in association with bathing or wading in the sea and again we do well not to ignore the possibility of some direct connexion in this respect. But the endemic poliomyelitis of large cities cannot be thus explained. The evidence at present suggests that apart from human carriers the virus may be kept alive and transmitted by a variety of agencies.

A RARE MALFORMATION OF THE HEART.

WE publish this week an account by Professor Wardrop Griffith of a rare but highly instructive anomaly of the heart. The heart was that of a man, aged 30, with a communication between the right and left ventricles, but the abnormal opening, in place of occupying the site of the pars membranacea septi—the last part of the interventricular septum to be formed—was situated further forwards. In this rarer form the infundibulum of the right ventricle communicates with the left ventricle under the aortic cusp from which the right coronary artery opens; in the usual anomaly the "body" of the right ventricle communicates with the left under the "non-coronary" cusp of the aorta. Professor Griffith has done a service by drawing attention to the fact that the rare or anterior opening is of a totally different nature from the common or posterior opening. On the part of the interventricular septum which forms the lower margin of the posterior opening is found the main stalk of the auriculo-ventricular bundle; the bundle divides and passes down on the sides of the interventricular septum before the site of the anterior opening is reached. We may thus infer, from a study of such malformations as that described by Professor Griffith, that the interventricular septum may be regarded as being made up of two parts—a posterior and an anterior. Recent investigations into the comparative anatomy and development of the heart have provided an explanation of the double origin of the interventricular septum and the presence of interventricular openings of two kinds. The explanation is found in the development of the mammalian right ventricle; it is produced by the fusion of two chambers—the ventricle proper and the bulbus cordis which forms the fourth or final chamber of the heart in lower vertebrate animals. The ventricle proper forms only the "body" of the mammalian ventricle; its infundibulum is developed from the bulbus cordis. The left ventricle is also primarily of double origin, but in the human heart and in that of all higher vertebrates the "bulbar" element undergoes—except as a rare anomaly—a complete atrophy. The importance of Professor Griffith's communication lies in the fact that it calls attention to the double constitution of the right ventricle. The physiology of the infundibulum of the right ventricle has never been studied apart from the ventricle as a whole; from the history of the infundibulum we are justified in supposing that it must play a distinctive rôle in the physiology of the circulation.

ROTARY DISLOCATION OF THE ATLAS.

IN the *Boston Medical and Surgical Journal* of Nov. 28th, 1914, Dr. John J. Morton has reported a case of rotary dislocation of the atlas with certain unusual features. A boy, aged 12 years, was admitted to hospital complaining of pain in the back and inability to raise the head from a bowed position on the left shoulder. Three days previously he was wrestling with a much bigger boy and was twisted violently towards the right while his head was firmly held between his opponent's legs.

Immediately afterwards his head was inclined towards the left shoulder and could not be brought back to the middle line. He suffered from severe pains in the neck which prevented him from sleeping for two nights. Directly after the injury he could not speak aloud. He had considerable difficulty in swallowing and took nothing but liquids. On examination he appeared to be in much pain and spoke in a scarcely audible whisper. His head was fixed in such a position that the left cheek rested on the corresponding shoulder. He supported his forehead with his left hand and cried with pain if the hand was removed. Passive movement of the head was very painful. The spines of the axis, seventh cervical, and first dorsal vertebræ were prominently felt and there was a depression below the occiput. The transverse process of the atlas could not be felt in the normal position on either side. The mouth could not be opened sufficiently to allow examination through the pharynx. The reflexes were exaggerated on both sides. A radiogram taken from a lateral position showed a displacement between the atlas and axis, an eighth cervical vertebra, and an appearance which caused suspicion of a fracture of the atlas. Under anæsthesia an attempt was made to reduce the deformity. Examination then showed a prominence on the right side of the pharynx on a level with the soft palate, which was thought to be the transverse process of the atlas. The head was extended on the body and gently rotated toward the right. At the same time an assistant pressed on the prominence in the pharynx. The head easily came to the middle line without a catch or click of any kind. The position was maintained by a bandage around the head, neck, and chest. On regaining consciousness the pain had disappeared and normal phonation was restored. At the end of two weeks the bandage was removed and passive movement of the head was possible without restriction or pain. A skiagram showed the atlas and axis in normal relation. At least 14 cases of uncomplicated rotary dislocation of the atlas have been recorded and many cases associated with fracture of the odontoid process or arch of the atlas. Aphonia has not been previously reported as a symptom of rotary luxation, though it has been observed in other forms of dislocation of the atlas and in dislocations of the upper cervical vertebræ. It appears to be due to injury of the vagus nerve. Supporting the head with the one or both hands, difficulty in opening the mouth, and dysphagia have been observed in cases of dislocation of the atlas. The last of these symptoms has been attributed to injury of the upper cervical nerves.

THE POSITION OF FINE CHEMICALS.

AN authoritative estimate of the part played by this country in chemical manufactures was given in a paper recently read before the Newcastle section of the Society of Chemical Industry by Mr. W. H. Martin, J.P., F.R.S.E., F.C.S., a well-known chemical manufacturer. After expressing the opinion that there is absolutely no more reason for the Government either directly or indirectly to subsidise or assume control of the dye manufacturing industry than of any other, he stated his impression that there are many important manufacturers in this country who will quickly cope with the necessities of the consumers. He alluded forcibly to the ignorance which prevails as to what our nation does accomplish in the way of manufacturing chemicals of prime importance, and nowhere is this more apparent, he added, than in the region of medical substances. With regard to morphia, for example, regret has been expressed that the supply comes from Germany. As a matter of fact, practically the whole supply for Europe, including Germany, is manufactured in Great Britain. Quinine, again, though largely made on the continent, is produced in quantities in this country which are far more than is required for the whole of the British Empire. The case of caffeine is interesting. Mr. Martin reminds us that it was first made by an Edinburgh firm and exhibited by them at the Vienna exhibition of 1873; after that, when the demand increased, it was made in Germany for a considerable period, until our Government allowed the waste tea which came into the London docks to be denatured. Since that step was taken caffeine has been made to an enormous extent in this country. In respect of other alkaloids produced in this country, Mr. Martin quoted the following words of a manufacturer: "On the general question of alkaloids we may assure you that in scarcely any instance have we ourselves been outstripped by Germany in such products as we have ever seriously taken up. On the contrary, before the war Germany was our best customer, and we venture to think this is a fairly good answer to a great deal of the loose talk at present indulged in by writers to the newspapers on what is sometimes described as the decadence of British industries." Apparently no chloroform comes from Germany at all, but it is made there for home use, while British chloroform is exported to a considerable extent to all parts of the world. The early success of certain synthetics, notably antipyrin, has proved, Mr. Martin thinks, a snare to German science. "Hardly a month passes," he said, "but that some new substitution compound with a trivial name to indicate its alleged medicinal properties, and a scientific name intended to suggest profound research, is introduced to English medicine." For a time, he allows, we shall be placed at a great inconvenience with respect to a *few* remedies which are of value, but he has been assured by one of the oldest aniline manufacturers in this country that there are no difficulties in making these drugs by anyone who understands the business, that they are being made, that their output is being increased enormously, and that probably new manufacturers are introducing synthetic medicinal products. With regard to scores of other synthetic remedies (so-called) he is of the opinion that the sooner they are consigned to the oblivion from which German enterprise brought them the better for science and medicine. Mr. Martin in the closing sentences of his interesting paper gave a very suggestive example of the severe handicap experienced in this country by the restrictions placed on experiments upon animals. His firm were the first to manufacture animal extracts, following the original suggestions of Brown-Séquard. At the instance of Professor George Murray they prepared, above all, thyroid extract. But in the case of suprarenal extract they were soon outdistanced by the importation of the active principle from America and Germany. This product was standardised by physiological experiment, as is necessary in order to guarantee its activity and purity. Delay in developing an equally active and pure extract here was caused by the restrictions of the Government, but eventually a licence was granted and a product was put upon the market equal to

what was being made and sent into this country from abroad. As Mr. Martin rightly points out, there exists this difference in regard to experimental research in relation to medicine at home and abroad, that while in Germany and America no difficulty is placed in the path of scientific research or manufacture, we at home are hampered by numerous restrictions, and it is only with difficulty and at great expense that animals suitable for scientific purposes can be obtained. In every town hundreds of animals are annually destroyed without having been of the smallest service to any human being, whereas in our laboratories during their passage to euthanasia the same animals might have ministered to the suffering of humanity. With Mr. Martin's statements as to the hindrance to scientific research caused by the restrictions on the employment of animal life for the purpose we are in agreement, but the desire of the legislature to make the regulations as little oppressive as possible is seen to be sincere. We accept also his statement, all the more gladly that the reverse has been so widely said, that we possess a flourishing British chemical industry, and that it is not so much a question of restoring lost trade as that of expanding what we possess and of putting renewed vigour into it and fresh scientific force. We are glad to learn that the decadence so freely talked about is only apparent and not real, but it is none the less necessary that we should increase the scope of our activities by admitting into them all the resources of modern skill and knowledge in every detail.

Dr. George Sigerson has been appointed by the Lord-Lieutenant of Ireland to be a Member of the Board of Visitors of the National Museum of Science and Art, Dublin, for a period of five years.

Dr. S. A. Kinnier Wilson has been elected a corresponding member of the Philadelphia Neurological Society.

LEPER HOUSES AND MEDIÆVAL HOSPITALS.[1]

BY CHARLES A. MERCIER, M.D. LOND., F.R.C.P. LOND., F.R.C.S. ENG.,
LATE PHYSICIAN FOR MENTAL DISEASES, CHARING CROSS HOSPITAL.

IN the last lecture[2] I said that the leper house partook of the nature of the prison, the monastery, and the almshouse. With the prison aspect I have dealt, but at least equally important in the minds of the founders, not only of leper hospitals but of hospitals for whatever object, was that the hospital should be carried on as a monastic institution.

The Monastic Constitution of the Mediæval Hospitals.

Many hospitals had churchmen at their head; many were on the same foundation as a college for priests, or for canons, regular or secular, and all without exception had a monastic or semi-monastic constitution. The obvious explanation is that in times when there was no guarantee society to ensure the faithfulness of the almoner of charitable funds there was a manifest safeguard in entrusting the administration of such funds to those who had taken a vow of poverty, and had bound themselves to live what is now known as the simple life. This is the obvious explanation, but I believe that, like most obvious explanations, it is incorrect, or at least insufficient. It is scarcely possible for us in these days to realise how large a part in the lives of our forefathers was occupied by the Church. It might have been said of the Church, as was said of another matter, that—

> 'Twas allotted to man with his earliest breath,
> Attends at his birth, and awaits him at death,
> Presides o'er his happiness, honour, and health,
> Is the prop of his house, and the end of his wealth—

and in the interval it regulated a very large share of his life. The chief field of industry was the tilling of the soil, and not only was one-third of all the land of this country in the hands of the Church, but at every gathering of the produce of the land the husbandman must set apart one-tenth as tribute for the Church. The very calendar was reckoned, not by the days of the month, but by the saints' days and the feasts of the Church. A date was recorded, not as the 16th of June or the 11th of August, but as the eve of St. Alban or the day after the feast of St. Lawrence. The priest combined in himself all the learned professions, and no undertaking of importance could be effected without him. At any rate in rural districts, he was not only the priest but the only available physician and lawyer. When the layman was sick the priest heard his confession and exhorted him to benefit the Church by his will. Then, that there might be no backsliding, the priest assumed his legal function, and as a lawyer drew his client's last will and testament. In his character of physician he then put his patient to death; and finally, resuming his legal functions, he proved the will in the ecclesiastical court. The reason why every hospital had a semi-monastic foundation was, as I take it, that it never occurred to the pious founder that it could have any other. It was as natural, as proper, as inevitable to him to provide a monastic framework for his charity as it is to us to provide physicians and nurses. No additional motive was needed; but if one had been needed, it would have been found in the provision, so often made, for a perpetual succession of prayers for the soul of the founder. In fact, in some hospitals, notably in that founded by the celebrated Richard Whittington, thrice Lord Mayor of London, this was frankly the main object of the foundation. By his will, Whittington founded first a college of priests and clergymen, and in the same foundation a hospital for 13 poor people; and he strictly enjoined them all, priests, clergy, and poor alike, to pray daily at all the canonical hours for his soul and that of Alice his wife; and at other times, when they were not at church, they were to say daily thrice 50 angelical salutations, with the Lord's prayer 15 times, and were all to meet daily at the tomb of the founder to say the psalm De Profundis and to invoke the mercy of God on the souls of him and his wife Alice. It seems, therefore, that Whittington took every precaution that was humanly possible to secure for himself and his wife a prosperous hereafter, and it looks as if the charity that he exercised towards the 13 poor began, in a special sense, at home.

In many hospitals the same regulations as to attendance at divine service at all the canonical hours are enjoined on the inmates, and in addition they are exhorted to their private devotions, which were by no means to be perfunctory or neglected, and punishment, which would now be looked on as

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[1] Being an abstract of the FitzPatrick lecture No. II.
[2] THE LANCET, Jan. 2nd, 1915, p. 33.

severe, was inflicted for negligence. The hospital was, in fact, a fourth order of religious house, ranking after the college, as the college ranked after the priory, and this after the abbey, and any of these might be superior in wealth and influence to some neighbouring foundation of superior dignity. The hospital usually, though not invariably, had some charitable function tacked on to its monastic purpose. Most hospitals, especially after the cessation of leprosy, were almshouses for the support of the poor and the infirm; many were for the relief of travellers, and others for the care of the sick.

Hospitals Founded in the Middle Ages.

The first hospital founded in England was established early in the tenth century at Flixton in Yorkshire by one Acehorne. Its government was entrusted to an alderman and 14 brothers and sisters, and its purpose was the preservation of travellers, that they might not be devoured by wolves and other wild beasts abounding there. Curiously enough, the second English hospital, which was founded shortly afterwards in the reign of the same king, Athelstan, was also connected with wolves, for it was endowed by the King with Peter corn—that is to say, one sheaf of corn from every plough throughout the bishopric of York. These sheaves came into the King's hand by gift from the diocese on condition that he should destroy the wolves, which were so numerous in those parts that they devoured the cattle, and they were accordingly quite extirpated by King Athelstan. Of this hospital, which was first dedicated to St. Peter, and afterwards, on its refoundation by King Stephen, to St. Leonard, the ambulatorium still exists at York. It was, at the visitation in the time of Henry VIII., the wealthiest hospital in England, its revenues exceeding those even of St. Bartholomew's in Smithfield. St. Leonard's still remains a charitable foundation, and still supports 21 poor persons in place of the 224 that it maintained at the height of its prosperity.

These appear to be the only hospitals founded in this country before the Conquest, but ten years after that event the Pilgrims' House was founded in connexion with Battle Abbey, and two others, St. Nicholas at Lewes and St. Wulstan at Worcester, were founded in the reign of the Conqueror. A third, St. Nicholas at Nantwich, was founded in the year of his death, but what the objects of these hospitals may have been cannot now be known, for no record remains. It was Lanfranc, however, the great Archbishop of William, who founded in the succeeding reign the first hospitals for the sick ever established in this country. These were the Leper House of St. Nicholas at Harbledown, near Canterbury, and the Hospital of St. John the Baptist without the North Gate of Canterbury for poor men and women "suffering from several diseases"—that is to say, from diseases other than leprosy. Both these foundations are actively dispensing charity at the present day, though they are no longer devoted to their original purpose of receiving the sick. These six hospitals were all that we know of that were founded in this country in the eleventh century, and all of them were founded in the last 34 years of that century.

In the next 50 years there were founded 46 hospitals, of which 24 were leper houses; and the whole of the twelfth century saw the foundation of 168 hospitals, including 80 leper houses. In the wonderful thirteenth century the foundation of leper houses had begun to slacken, in spite of the increase of the population, the number being only 75, but 167 hospitals for other purposes were founded in that century, the combined number being 242. In the middle of the fourteenth century occurred the Black Death, which swept off from a half to two-thirds of the population, and accordingly we find that while 111 hospitals (42 of them leper houses) were founded between 1300 and 1350, only 67 (including 20 leper houses) were founded in the remainder of the century. The falling-off of leper houses was due in great part, no doubt, to the diminution of leprosy, for in the next half-century no leper house at all was founded, and in the rest of our history the number was not more than ten. However, for some reason the rate of foundation of hospitals was not maintained, only 96, including five leper houses, being founded in the fifteenth century, at the conclusion of which the Middle Ages may be considered to have come to an end. The total number of hospitals founded in this country in the Middle Ages was, as far as is known, at least 691, of which 224 were leper houses. This provision for the poor and sick was, of course, in addition to the very large amount that was provided by the monasteries and friaries, and in proportion to the population was certainly generous.

The Objects of the Foundations.

The objects of these foundations were various, and some of them strike us as whimsical. They were sometimes purely monastic, but usually there was some charitable purpose tacked on to the monastic constitution of lay brothers and lay sisters, and most of them were wholly or in part almshouses. In many cases the recipients of the charity were the poor and infirm; in one case poor, sick, and lame; in one case poor distressed people, blind, and other poor persons; in one for the poor, the sick, and for entertaining travellers. Some hospitals were merely for the dispensation of doles, either of money or of food. At Billeswicke, near Bristol, the foundation provided that a hundred poor men were to be fed daily for ever, and each of the poor was to have a loaf of the weight of 45 shillings and made of equal parts of bean flour and barley. He was to have also a sufficient quantity of pottage made with oatmeal. This was in 1229. Or the dole was of money. Queen Eleanor, the dowager of Henry II., directed that at St. Catherine's by the Tower (after the usual religious services had been satisfied) every day in the year till the 16th of November there should be given to 24 poor one halfpenny each, equivalent at the present day to about fifteen-pence; and on the 16th of November, being the day on which King Henry died, one halfpenny each to a thousand poor. In many cases the hospitals provided lodging for poor persons, sometimes alone, sometimes with board and clothing, sometimes with a pecuniary allowance instead of board or of clothing, or in addition to both. Thus, William Elsing, the founder of Elsing Spittle (1329), provided that "in regard that many poor people got their bread by the alms of good Christians, yet had no lodging to entertain them," there should always be beds and rooms for one hundred blind and other poor wretched persons." This was the first hospital founded in this country specifically for the blind. At Newstede, near Stamford in Lincolnshire (twelfth century), a hospital was founded for seven infirm poor persons, who were to reside there and to have necessary food and clothing. At St. Bartholomew's at Oxford, there were to be six infirm brothers and two sound to take care of its business, and each brother

was to have ninepence (about 20*s.* now) per week, and the master, who was to be a priest, six marks per annum.

Lepers' Allowances of Food and Clothing.

In several hospitals the amount and quality of the food and clothing allowed to the inmates was minutely specified, and in some was extremely liberal. Thus at the Leper House of St. Mary Magdalen at Ripon (early twelfth century) every leper was allowed a garment called rak and two pairs of shoes yearly, and every day a loaf fit for a man's sustenance, and half a pitcher of beer, a portion of flesh on flesh days, and three herrings on fish days. In process of time, no lepers coming to the hospital, the charity was changed to a dole at the feast of St. Mary Magdalen to every poor person coming, of one loaf worth a halfpenny, the quarter of corn being worth 5*s.*, and one herring. The loaf would now be a tenpenny one. At the great Leper House of St. Julians (1146) at St. Albans the allowances were extremely generous. Each leper had every week seven loaves, five white and two brown, and every seventh week 14 gallons of beer, and on each of the great feasts of the Church one loaf, one jar of beer, or a penny for the same. At Christmas each leper received 40 gallons of good beer, or 40 pence for the same, and his share of two quarters of pure and clean corn. At the feast of St. Martin each leper was to have a pig, on the feast of St. Valentine a quarter of oats, on the feast of St. John the Baptist two bushels of salt, on each Wednesday in Lent bolted corn of the weight of one of their loaves; and in addition the following sums of money: On each of the great feasts of the Church one obolus; at the feast of St. Julian and at the feast of St. Alban one penny; at Easter one penny, which is called flavonespani; on Ascension Day one obolus for buying potherbs; on the feast of St. John the Baptist 4*s.* for clothes; at Christmas 14*s.* divided among them for their fuel during the year; and at the feasts of Easter and Michaelmas 30*s.* 5*d.* to be divided between then equally.

At Shireburn Hospital in Yorkshire (1311), for 65 lepers, the daily allowance of each leper was a loaf weighing five marks and a gallon of ale to each; and betwixt every two one mess or commons of flesh three days in the week, and of fish, cheese, or butter on the remaining four. On high festivals a double mess, and in particular, in the feast of St. Cuthbert in Lent, fresh salmon if it could be had, if not, other fresh fish; and on Michaelmas day four messed on one goose. With fresh fish, flesh or eggs, a measure of salt. When fresh fish could not be had, red herrings, three to each mess, or cheese or butter by weight, or three eggs. During Lent each had a razer of wheat to make frumenty and two razers of beans to boil; sometimes green meat or onions; and every day except Sunday the seventh part of a razer of bean meal, but on Sunday a measure and a half of pulse to make gruel. Red herrings were prohibited from Pentecost to Michaelmas, and at Michaelmas each received a razer of apples.

The lepers had a common kitchen and a common cook, and fuel, and utensils for cooking—viz., a lead, two brazen pots, a table, a large wooden tub for washing or making wine, a laver, two ale vats, and two bathing vats. They were provided with fire, candles, and all necessaries; the old woman who attended on the sick had every week three wheaten loaves and one mess of flesh or fish. Each leper had a yearly allowance for his clothing of three yards of woollen cloth, six yards of linen, and six of canvas, and the tailor had his meat and drink the day on which he came to cut out their clothes. Even the grave digger had his meat and drink when a brother or sister was buried. From Michaelmas to All Saints two baskets of peat were allowed on double mess days, and four baskets daily from All Saints to Easter. On Christmas Eve four Yule logs, each a cartload, with four trusses of straw, and so on, and once a year every leper received 5*s.* 5*d.* in money.

Hospital for Persons Losing their Memory.

From time to time we read in the newspapers accounts of persons found wandering in the streets, having entirely lost their memories, and knowing not who they are, where they live, or even their own names. We are apt to think that this is a purely modern occurrence, and that it is due in some unexplained way to the intensity of the struggle for life in these days, and the rapid rate and high pressure at which we live. It seems, however, that it was not unknown five centuries and a half ago, for in 1371 Robert Denton purchased for 40*s.* of King Edward III. a licence to found a hospital in a house of his own, in the parish of Berking Church in London, "for the poor priests and other poor men and women in the said city who suddenly fell into a frenzy and lost their memory, to reside in till cured." For some reason, perhaps for a lack of patients answering this description, Robert Denton afterwards changed his mind, for we find that Richard II., in the second year of his reign, by charter allowed him to annex his charity, and another messuage in the parish of St. Laurence Pountney, to the Hospital of St. Catherine by the Tower.

Sources of Revenue.

The liberal allowances made to so many inmates in the larger hospitals imply considerable revenues, and the revenues of some of the mediæval hospitals were very large. They were derived for the most part from endowments, though then as now a portion of the revenues were obtained from alms, which we now entitle voluntary contributions, economically making eight syllables do the work of one. The endowments were very varied in character, consisting for the most part of land, or of the appurtenances of land, such as houses, mills, manorial rights, free pasturage, rights of lopping and topping or collection of firewood, fish-ponds, and so forth. Sometimes, however, the endowment was of a franchise, more or less valuable. The most valuable of these was the right to hold an annual fair, which was bestowed upon, for instance, St. James's Hospital, near Westminster. All leper houses were by a bull of Pope Alexander III. freed from the obligation of paying tithes. Some, such as the great house at Burton Lazars, were exempted by royal grant from all sorts of taxes and contributions. Some received tolls for passage by land or by water, or exemption from tolls. Thus Henry III. gave to the Maison Dieu at Dover the tenth of the profits accruing to him by passage of the said port, and Magnus, King of Man and the Isles, exempted the ships belonging to Conyngesheved Hospital in Lancashire from paying any dues in the ports of his dominions.

The bounty of some benefactors was so generous that they granted freely what did not belong to them. Thus King Henry III. granted to the Hospital of St. John without the Gate at Oxford

the garden of the Jews at Oxford, but he generously reserved to the owners sufficient land wherein to bury their dead. King John gave to the poor of St. Giles's Hospital at Shrewsbury both hands full of every sack of corn brought into the market there, and one handful of every sack of flour. The Knights of St. John of Jerusalem petitioned the King for the grant of the tithes of the parish of Boston in Lincolnshire, and the King was graciously pleased to rob the parish church accordingly, and to make the Knights of St. John receivers of the stolen goods.

Some forms of charity were distinctly economical, and were designed to benefit the hospitals at a minimum of cost to the benefactor. For instance, King Henry III. granted to the Hospital of St. John Baptist at Coventry free licence to the brothers and sisters to go or send any messengers abroad to beg for alms during the space of seven years, and enjoyned all persons to defend and assist them. The most thrifty bequest ever made to any hospital was that made by former Kings of England, and confirmed by Henry IV., to the Hospital of St. Giles near Maldon in Essex. The keeper or master thereof was to have towards the maintenance of the leprous burghers of the said town the forfeitures of bread, ale, and fish that were not good and wholesome in the said town of Maldon. It seemed to me very unlikely that a device of such a thrifty and economical character could have been originated by the unaided genius of the English, and I looked to a more northern source for the original of the plan, nor did I look in vain. It was provided, I find, by the Parliament of Scone, in 1386, that "gif ony man bring to the markit corrupt swine or salmond to be sauld, they sall be taken by the Bailies and incontinent without any question at all sall be sent to the lipperfolke, and gif there be no lipperfolke, they sall be destroyed uterlie."

The Ruin of the Mediæval Hospitals.

In the course of time, as leprosy died out in the country, the leper houses were put to other uses. In some, the endowment was faithfully applied to other charitable uses. Thus St. Mary Magdalen at Ripon, when no more lepers came there, was devoted to the relief of wayfarers, especially begging clergymen, meaning, no doubt, Franciscan friars, that they should be therein relieved one night with food and a bed, and be gone in the morning. This hospital also dispensed doles to the poor. But in many leper houses, and other hospitals also, the successive visitations ordered from time to time by different kings and bishops disclosed gross abuses. Hospitals intended for the poor dispensed their hospitality to well-to-do people who paid for their accommodation, thus reminding us of the similar transformation of the great public schools and of the hospitals founded in modern days for the reception of the needy insane. The master or warden often became an absentee, and drew his emoluments without performing any duties, so that the hospital fell into decay and neglect; and not only in this but in holding a plurality of such posts the masters of hospitals emulated the parochial clergy. Not only was the income of the hospital spent for the private benefit of the officials, but its capital was raided for the same purpose, so that in less than 40 years the income of St. Leonard's at York diminished by nearly two-thirds.

But the ruin of the mediæval hospitals was the great spoliation by Henry VIII. He began with the small monasteries, then the great monastic bodies were destroyed, and at length his greed devoured almost every charitable institution in the country. Many of the hospitals were affiliated to religious houses, and these were the first to be robbed. There is no doubt that the monastic constitution of the hospitals, which had been for centuries their safeguard, was now the cause and even the pretext of their ruin. We have seen that many hospitals were in fact collegiate bodies of priests, some with but little charitable function, and some with none at all. Hence they were involved in common ruin with the formally monastic bodies, and the wealth of both went into a common fund for the enrichment of court parasites.

Many municipalities, concerned at this robbery of the poor, petitioned the king to be allowed to re-establish the charities that he had destroyed, and in some instances his Grace was graciously pleased to permit them to make good out of their own corporate funds, or out of their own pockets, the funds that he had stolen. In this way were re-established the great Hospitals of St. Bartholomew in Smithfield and St. Thomas in Southwark; St. Mary of Bethlehem in Moorfields, and many another hospital throughout the country. St. Bartholomew's is still a great and wealthy hospital, with large revenues, and livings in its gift, but it is shorn of most of the ample privileges bestowed upon it by Henry I., who declared that it should have all the privileges and immunities that any church in England enjoyed, and that it should be as free as his own crown; and accordingly he released it from shire and hundred, from suits and pleas and murders, and geld and Danegeld, and hydage and assize, and works at castles or rebuilding of them or of bridges, or enclosing of parks; and carrying of wood and other things, as also from ferdwit, hengwit, wardpan, averpan, blodwite, futwite, childewite, hundredespan, tethinepan, muchbryche, mischeninge, schewinge, fridsocre, westgeiltheof, wardwithe, utterne, fowinge, and withfange.

THE Governor of Mauritius, in a telegram to the Secretary of State for the Colonies received at the Colonial Office on Jan. 4th, states that 10 cases of plague were reported for the week ended Dec. 31st, all of which were fatal.

TINCTURE OF OPIUM AND THE POISONS SCHEDULES.—At an inquest held by Dr. F. J. Waldo at Southwark upon the body of a woman who had died from heart failure following pneumonia, it came out in the evidence that the deceased had been in the habit of consuming four or five ounces of tincture of opium weekly. In connexion with this and with observations made as to the ease with which narcotics could be purchased, the attention of the jury was called by the coroner to the fact that after Jan. 1st, 1915, tincture of opium would find itself transferred from the second to the first schedule of the Pharmacy Act. The drug as sold would be stronger owing to the issue of the new edition of the British Pharmacopœia, and the signature of the poisons book at each transaction and other precautions and formalities associated with the sale of drugs in the first schedule might be expected to have an effect upon the number of deaths from narcotic poisoning. Dr. Waldo, in summing up, explained and dwelt upon this point, which druggists will have to bear in mind, and also made observations upon the frequency with which in cases of death inquired into by him the habit of taking drugs had been contracted through medical men prescribing them in oriental countries, and through the use of them being continued by the patients afterwards without medical advice. In other instances the habit was first acquired through the easy purchase by the public of quack compounds and advertised "remedies" for disease.

A MONTHLY RECORD OF ATMOSPHERIC POLLUTION.

COMMITTEE FOR THE INVESTIGATION OF ATMOSPHERIC POLLUTION:

Summary of Reports for Month ending Oct. 31st, 1914.

1	2	3	4	5	6	7	8	9	10	11	12
			Metric tons of deposit per square kilometre during month.								
			Insoluble matter.			Soluble matter.			Included in soluble matter.		
Place.	Correspondent.	Rainfall in millimetres.	Tar.	Carbonaceous other than tar.	Ash.	Loss on ignition.	Ash.	Total solids.	Sulphate as (SO_4).	Chlorine (Cl).	Ammonia (NH_3).
ENGLAND—											
Birmingham, Central ...	Dr. J. Robertson, M.O.H.	39	0·12	4·36	12·37	1·54	4·81	23·20	2·72	0·31	0·09
,, Aston	,,	39	0·04	2·68	2·38	1·17	3·06	9·32	1·25	0 20	0·04
,, S.W.	,,	42	0·04	0·89	1·86	0·83	2·18	5·70	0 91	0·19	0 03
Bolton	Dr. J. E. Gould, M.O.H.	72	0·21	1·85	7·52	3·17	8·34	21·10	4 73	0 92	0·05
Exeter	Mr. H. Lloyd Parry, Town Clerk.	34	0·04	1·37	3·22	0·68	1 41	6 73	0·76	0·27	0·01
Kingston-upon-Hull	Mr. A. R. Tankard, Public Analyst.	58	0·13	3·68	5·44	5·26	7 02	21 53	4 24	1·18	0·01
Liverpool	Dr. E. W. Hope, M.O.H.	52	0·19	2·28	9·50	3·13	3·87	18 97	3 03	0·59	0·17
London—											
Meteorological Office ...	Director, THE LANCET Laboratory.	26	0·08	0·61	1·70	2·13	2 98	7·52	1·62	0·54	0·02
Embankment Gardens ...	Mr. J. Ollis, Chief Officer, Public Control Department, L.C.C.	26	0·14	3·14	4·26	3·80	10·62	22 56	3·13	1·70	0·02
Finsbury Park...	,,	31	0·08	0 98	2·21	0·68	2 96	6·91	1·28	0·22	0·04
Ravenscourt Park	,,	22	0 03	0·78	1 46	0 57	1·51	4·35	0·74	0 25	0·06
Southwark Park	,,	31	0·02	3·98	6·48	1·07	5·33	16·88	2·93	0·47	0 06
Wandsworth Common ...	,,	29	0·03	1·64	3·16	0·70	3.45	8·98	1·76	0 37	0 03
Victoria Park	,,	19	0·06	1·23	1·96	1·56	4·56	9·37	2·05	0·28	0·05
Golden Lane	Dr. W. J. Howarth, M.O.H.	26	0 06	3·30	5 24	1·53	3 58	13·71	2·39	0·45	0·13
Malvern	Mr. W. Osborne Thorpe, Engineer U.D.C.	36	*Nil.*	0·20	0·22	0·50	0·79	1·72	0·43	0·19	0·02
Manchester—											
Cheadle	Mr. J. Warrington, Secretary, Air Pollution Advisory Board.	29	0·05	1·98	2·19	2·20	6·48	12·30	3·17	1·18	0·02
Davyhulme	,,	39	0·02	1·41	4·69	0·51	4·12	10·75	2·61	0·35	0·08
Fallowfield	,,	38	0·06	1·50	4·78	0·91	4·25	11·50	2·53	0·51	0 04
School of Technology ...	,,	42	0·12	5·04	9·12	1·26	4·41	19·95	2·94	0·52	0·06
Whitefield	,,	56	0·03	1·36	4 83	0·59	5·17	12 58	3·32	0 39	0·04
Newcastle-on-Tyne	Dr. H. Kerr, M.O.H.	42	0·18	3·74	5·78	1·91	4·15	16 47	2 34	0·60	0·13
Oldham	Dr. J. B. Wilkinson, M.O.H.	62	0 62	6·65	15·80	1·49	4·47	29·00	2·54	0·44	0·29
Sheffield—											
Attercliffe Burial Ground	Prof. W. P. Wynne, The University,	51	0·27	4·78	8·73	1·58	6·85	22 21	3·03	1·76	0·16
Hillsborough Park	,,	49	0·06	1·49	4·04	1·26	3·79	10·64	2 22	0·76	0·04
Meersbrook Park	,,	56	0·13	1·43	3·38	0·72	4·74	10·40	1 97	0·86	0·04
Weston Park	,,	50	0·11	1·53	3·03	1·45	4·30	10·42	2·58	0·74	0·04
York...	Dr. E. M. Smith, M.O.H.	41	0·08	1·43	3·08	1·49	1·83	7 91	1·48	0 46	0·28
SCOTLAND—											
Greenock*	—	—	—	—	—	—	—	—	—	—	—
Leith	Mr. Thomas Bishop, Sanitary Inspector.	44	0·08	2·40	4·72	1·14	3·86	12·20	1·80	0·53	0·09
Paisley	Mr. W. W. Kelso, Sanitary Inspector.	36	0·14	2·89	3·21	2·01	2·15	10 40	1·40	0·25	0·08
Coatbridge	Mr. A. G. Dutch, Chief Sanitary Inspector.	41	0·05	1·12	2·30	0·56	1·73	5 76	0·90	0 21	0·05

* No returns to date.

Col. 4 includes all matter insoluble in water but soluble in CS_2. Col. 5 includes all combustible matter insoluble in water and in CS_2. Col. 6 includes all earthy matter, fuel, ash, &c. One metric ton per sq. kilometre is equivalent to: (*a*) Approx. 9lb. per acre; (*b*) 2·56 English tons per sq. mile; (*c*) one gramme per sq. metre; (*d*) 1/1000 millimetre of rainfall (see Col. 3).

The analytical work involved in the above return was undertaken respectively by J. F. Liverseege, F.I.C., Birmingham; Harry Hurst, B.Sc., F.I.C., Bolton; F. Southerden, B.Sc., F.I.C., Exeter; A. R. Tankard, F.I.C., Kingston-upon-Hull; W. H. Roberts, M.Sc., F.I.C., Liverpool; S. A. Vasey, F.I.C., Director, THE LANCET Laboratory (London Meteorological Office collections); J. H. Coste, F.I.C. (Embankment Gardens, Finsbury Park, Ravenscourt Park, Southwark Park, Wandsworth Common, Victoria Park collections), London; F. L. Teed, D.Sc., Golden-lane, London, E.C.; C. C. Duncan, F.I.C., Malvern; E. Knecht, Ph.D., M.Sc., Cheadle, Davyhulme, Fallowfield, School of Technology, University, Whitefield (Manchester collections); J. J. Dunn, D.Sc., Newcastle-on-Tyne; Professor W. P. Wynne, Attercliffe Burial Ground, Hillsborough Park, Meersbrook Park, Weston Park (Sheffield collections); S. H. Davies, M.Sc., York; J. W. Biggart, F.I.C., Greenock; A. Scott Dodd, B.Sc., F.I.C., Leith and Paisley; Messrs. R. R. Tatlock and Thomson, Coatbridge. The correspondents referred to in col. 2 are for the most part public health authorities.

EDINBURGH ROYAL INFIRMARY.—The report by the managers of the Royal Infirmary, Edinburgh, shows that the total number of in-patients during the year ending Oct. 1st, 1914, was 12,618. Of these 4286 were medical cases and 7782 surgical. The average daily number of in-patients was 847. The highest number of patients on any one date was 887 and the lowest 706. The annual general meeting of the Court of Contributors to the Royal Infirmary was held on Jan. 4th, Lord Provost Inches presiding. The Lord Provost said that 359 sailors and soldiers had been treated in the infirmary since the outbreak of war, and it was expected that another 100 cases would be received during the next few days. In addition to the actual soldiers treated, there had passed through the infirmary wards a considerable number of recruits who suffered from varicose veins, hernia, and other conditions calling for operative treatment before these men could be accepted for military service. The surgeons were still treating cases of this nature, and in fact they were being admitted daily. Sir Joseph Fayrer has been relieved of his duties at the infirmary in order that he might take charge of the Second Scottish Hospital at Craigleith, and Dr. R. McKenzie Johnston has been appointed interim superintendent. The managers record their deep regret that Professor John Wyllie should have found it necessary through ill-health to resign his appointment as physician to the infirmary.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE undermentioned have been granted temporary Commissions as Surgeon in His Majesty's Fleet:—Thomas Stothart Farries and John Alexander Thompson (dated Dec. 29th, 1914).

ROYAL NAVAL VOLUNTEER RESERVE.

The following appointment has been notified:—Surgeon Probationer: J. S. Webster to the *St. George*, additional, for the *Rother*.

ROYAL ARMY MEDICAL CORPS.

Charles Vincent Mackay to be temporary Major (dated Dec. 2nd, 1914).

Lieutenant Ernest R. Walker relinquishes his temporary commission (dated Dec. 9th, 1914). Lieutenant Donald Aucutt relinquishes his commission (dated Nov. 25th, 1914).

The undermentioned to be temporary Lieutenants:—Dated Sept. 3rd, 1914: Arthur Martin Leake, V.C. Dated Sept. 23rd, 1914: Frank Dallmore. Dated Oct. 1st, 1914: Philip Heinrich Bahr. Dated Oct. 10th, 1914: Owen Richards. Dated Oct. 24th, 1914: Alfred George Stewart. Dated Nov. 17th, 1914: James Anthony Delmege Dated Nov. 22nd, 1914: John Cuthbert Matthews. Dated Nov. 25th, 1914: Hugh Hercus Cavendish Fuller. Dated Nov. 27th, 1914: Charles Aloysius Kenny. Dated Dec. 10th, 1914: William Hugh Steele and Allan Read Wilson. Dated Dec. 11th, 1914: Noel Ravenchil Rawson. Dated Dec. 14th, 1914: Donald John Gollan Grant, Richard Till Worthington, and James McKee Ferguson. Dated Dec. 15th, 1914: William Brown, James Maud Rishworth, and Wilfrid Robert Pagen. Dated Dec. 16th, 1914: Rhys Vaughan Powell, John Cornock Hawkes, James Jack, Edward Sandwith Johnson, William John Henry, William Readman, Harold Wacher, Erskine Herbert Worth, Charles Thompson Bishop, Herbert Roycroft Ford, John Bruce Low, Alexander Mearns, Ernest Godfrey Wheat, Walter William Hallchurch, Edward Seymour Chapman, Matthew James Johnston, John Duffin, Robert Best Jackson, Francis Joseph Ord King, Edward Percival Hadden Vickery, Eric Alfred Lumley, John William Grice, John Grimson Moseley, William Ernest Graves, Oswald Arnold Gee, Eric Alfred Wright, Edward Henry Allon Pask, George Macleod, Douglas Elder, James Johnston Sinclair, and Samuel Burnside Boyd Campbell. Dated Dec. 18th, 1914: Edward Loggie Middleton, Edward Ernest Hobson, Leslie Ellis Pimm, Samuel Lyle, Geoffrey Richard Heard, John Bertram McCabe, William McHutchison Binning, Evan Evans, Edmund Christie Fawcett, John Chisholm, and James Lee. Dated Dec. 20th, 1914: Francis Graham Crookshank and Thomas James Logan Thompson.

The undermentioned to be temporary Captains whilst serving with the Duchess of Westminster's War Hospital:—Dated Jan. 6th: Charles Samuel Myers and Thomas Munn Body.

The undermentioned cadets and ex-cadets of the Officers Training Corps to be Lieutenants (on probation):—Dated August 17th, 1914: David Stanley Martin. Dated Nov. 30th, 1914: John George Bennett. Dated Dec. 7th, 1914: George Brownrigg Hadden and Hallowes Lloyd Addison.

The undermentioned to be Lieutenants (on probation):—Dated Nov. 10th, 1914: Robert Alexander Anderson. Dated Nov. 27th, 1914: William Morris Lansdale. Dated Nov. 30th, 1914: Thomas Pollock Inglis and Francis Claud Lapage. Dated Dec. 4th, 1914: James Francis Quigley. Dated Dec. 7th, 1914: Francis Joseph Hallinan. Dated Dec. 15th, 1914: Howell Meyrick Williams. Dated Dec. 18th, 1914: Henry Parkes Whitworth.

The undermentioned are granted temporary rank whilst serving with the Australian Medical Unit: To be Major: Edward Thomas Thring. To be Captain: Walter Seymour Armstrong.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Captain Morton W. Ruthven is placed temporarily on the Half-pay List on account of ill-health.

TERRITORIAL FORCE.

Army Medical Services.

Captain John J. H. Beckton to be a Deputy Assistant Director of Medical Services of the South Midland Territorial Division, vice Major James W. Jennings, D.S.O., who vacates the appointment.

Royal Army Medical Corps.

2nd South-Western Mounted Brigade Field Ambulance: Captain Henry N. Barnett to be Major (temporary). To be Lieutenants: Philip Stanley Martin, Harold Burnet Porteous, and Bertram Michell Young.

2nd Northern General Hospital: Alfred Richardson to be Captain, whose services will be available on mobilisation.

Welsh Border Mounted Brigade Field Ambulance: To be Captains: Lieutenant Robert F. Gerrard (temporary) and David William Reese (late Captain, Northern Bengal Mounted Rifles).

2nd East Lancashire Field Ambulance: To be Lieutenants: George Robert Hitchin and William Joshua Cowan.

3rd East Lancashire Field Ambulance: To be Lieutenants: James Cowan and Frederic Battinson Smith.

2nd West Lancashire Field Ambulance: Captain Owen H. Williams to be seconded. To be Lieutenants: James Herbert Rawlinson, Edward Mansfield, George Charles King, and Leonard Sadgrove Gaskell.

5th London Field Ambulance: Captain William C. Macaulay to be Major (temporary).

2nd North Midland Field Ambulance: The undermentioned Lieutenants to be Captains (temporary): Claude M. Cowper and Alfred C. F. Turner.

2nd Welsh Field Ambulance: John Hargreaves Robinson to be Lieutenant.

4th London General Hospital: Robert Knox to be Captain, whose services will be available on mobilisation. David Ernest Stephens Davies to be Lieutenant.

1st Lowland Field Ambulance: Lieutenant Neil MacInnes to be Captain (temporary)

Lowland Mounted Brigade Field Ambulance: Major James Bruce to be Lieutenant-Colonel (temporary). To be Majors (temporary): Captain Farquhar Gracie and Captain Robert Y. Anderson. Edward Napier Thomson (late Cadet, Glasgow University Contingent, Senior Division, Officers Training Corps) to be Lieutenant.

1st Western General Hospital: Ernest Edward Glynn to be Captain, whose services will be available on mobilisation.

1st London (City of London) Sanitary Company: Captain Heaver S. Fremlin to be Major (temporary).

2nd London Sanitary Company: Captain Arthur J. Martin to be Major (temporary). To be Lieutenants: Kenneth MacLennan and John Henry Noel Price.

3rd West Riding Field Ambulance: Herbert Harry Emmerson (late Captain, West Riding Divisional Engineers) to be Captain.

3rd London General Hospital: Major Arthur E. J. Barker is seconded. Major James E. Lane is restored to the establishment.

West Lancashire Casualty Clearing Station: Captain George C. E. Simpson, from 2nd West Lancashire Field Ambulance, to be Captain.

1st Home Counties Field Ambulance: Captain Thomas H. Peyton to be Major (temporary). John Samuel Ward to be Lieutenant.

2nd Home Counties Field Ambulance: Captain George T. Willan to be Major (temporary).

3rd Home Counties Field Ambulance: Captain Hector G. G. Mackenzie to be Major (temporary). To be Lieutenants: Milward Cecil Hayward, Henry Wood Wier (late Cadet, Edinburgh University Contingent, Senior Division, Officers Training Corps), and Edgar William Matthews.

2nd Northumbrian Field Ambulance: To be Lieutenants: Thomas William Crowley and Arthur Edwin Tait.

1st Wessex Field Ambulance: Captain Francis D. Blandy, from Attached to Units other than Medical Units, to be Captain.

4th Northern General Hospital: Basil Hugh Campbell Lea-Wilson to be Captain, whose services will be available on mobilisation.

Sanitary Service: Lieutenant-Colonel and Honorary Surgeon-Colonel William Robert Smith, retired list, Territorial Force, to be Lieutenant-Colonel (temporary).

East Lancashire Casualty Clearing Station: Lieutenant Thomas B. Wolstenholme to be Captain (temporary).

2nd East Anglian Field Ambulance: Arthur William Hayward to be Lieutenant.

3rd East Anglian Field Ambulance: Lieutenant Leonard R. Toswill to be Captain (temporary). To be Lieutenants: Laurence Henry Hutchins and Edward Coomber Hobbs.

Attached to Units other than Medical Units.—To be Majors (temporary): Captain George P. Chappel and Captain William G. Sutcliffe. Lieutenant Charles S. Wink to be Captain (temporary). To be Captains: Surgeon-Captain Ernest Solly, retired list (late 5th Battalion, The Prince of Wales's Own (West Yorkshire Regiment)), and Lieutenant Arthur Scott Turner. To be Lieutenants: Norman Preston Laing, Ralph Austin Burditt, John Herbert Jordan, Samuel Rutherford, Robert Lyall Guthrie, Frederick Hunton, Tom Ramsden Kenworthy (late Cadet Corporal, Leeds University Contingent, Senior Division, Officers Training Corps), George Eustace, James Hornidge Chauncy, Frank Greenhalgh Prestwich (late Second Lieutenant, 7th Battalion, the Lancashire Fusiliers), and Percy Herbert Burton.

Officers Training Corps.

Royal College of Surgeons in Ireland Contingent, Senior Division: Second Lieutenant John S. Pegum to be Lieutenant (temporary).

University of London Contingent, Senior Division: Second Lieutenant Bernard F. Armitage, from the Cambridge University Contingent, Senior Division, Officers Training Corps, to be Second Lieutenant, for service with the Medical Unit.

THE NEW YEAR HONOURS.

Major Samuel Rickard Christophers, I.M.S., and Colonel George William Patrick Dennys, I.M.S., have been made C.I.E.'s; and Major James Husband, I.M.S., has received the Kaisar-i-Hind gold medal. In the new Order of the Military Cross for distinguished and meritorious services awards have been made to Captain H. Stewart, R.A.M.C., Captain E. D. Caddell, R.A.M.C., Lieutenant C. Helm, R.A.M.C., Lieutenant (temporary) E. J. Wyler, R.A.M.C., Captain J. F. Murphy, R.A.M.C., Special Reserve, and Captain Kanwar Indarjit Singh, I.M.S. The Indian Order of Merit of the Second Class has been conferred on Senior Sub-Assistant Surgeon Pandit Shanker Dass (attached) "for cool courage in attending wounded under heavy fire at Neuve Chapelle."

DEATHS IN THE SERVICES.

Colonel David Douglas Cunningham, C.I.E., I.M.S. Bengal (retired), at Torquay, in his seventy-second year. He joined the Bengal Medical Service in 1869 and served from 1874 as special assistant to the Sanitary Commissioner with the Government of India. From 1879 to 1897, the year in which he retired, he was professor of physiology in the Calcutta Medical College and was actively associated with the late Sir George King in researches with regard to quinine, which subsequently resulted in an inexpensive process of manufacture. In 1886 he accompanied the Tibet Expedition as Government naturalist. He was granted the honorary rank of colonel in 1907. Colonel Cunningham was an honorary physician to the King.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns with populations exceeding 50,000 persons at the last Census, 9261 births and 7395 deaths were registered during the week ended Saturday, Jan. 2nd. The annual rate of mortality in these towns, which had been 15·7, 16·1, and 14·0 per 1000 in the three preceding weeks, rose in the week under notice to 21·3 per 1000 of their aggregate population, estimated at 18,120,059 persons in the middle of 1914. During the 13 weeks of the quarter just ended the mean annual death-rate in these towns averaged 14·9, against a corresponding rate of 15·3 per 1000 in London. The annual death-rate last week ranged from 8·6 in Bournemouth, 10·6 in Oxford, 12·2 in Acton, 12·3 in Hornsey, 13·0 in Lincoln, and 13·1 in Darlington, to 27·5 in Liverpool, 27·7 in Newcastle-on-Tyne, 30·8 in Wigan, 32·1 in St. Helens, and 33·1 in Grimsby.

The 7395 deaths from all causes were 2513 in excess of the number in the previous week, and included 575 which were referred to the principal epidemic diseases, against 465 and 411 in the two preceding weeks. Of these 575 deaths, 269 resulted from measles, 89 from diphtheria, 86 from infantile diarrhœal diseases, 80 from whooping-cough, 31 from scarlet fever, and 20 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases was equal to 1·7, against 1·2 per 1000 in the previous week. The deaths attributed to measles, which had been 181, 210, and 175 in the three preceding weeks, rose to 269 last week, and caused the highest annual death-rates of 3·1 in Newcastle-on-Tyne, 3·7 in Plymouth and in Merthyr Tydfil, 4·1 in St. Helens, 4·2 in Huddersfield, 5·1 in Wigan, 5·5 in Devonport, and 8·0 in Grimsby. The deaths referred to diphtheria, which had been 62, 70, and 66 in the three preceding weeks, rose to 89 last week, and included 26 in London, 8 in Birmingham, 4 each in Liverpool and Cardiff, and 3 each in Norwich, Manchester, Bradford, Sheffield, and Darlington. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 71, 81, and 70 in the three preceding weeks, rose to 86 last week, of which 27 occurred in London, 7 in Liverpool, and 6 each in Birmingham and Manchester. The deaths attributed to whooping-cough, which had steadily increased from 35 to 58 in the six preceding weeks, further rose to 80 last week, and included 10 in London, 9 in Bristol, 5 in Newcastle-on-Tyne, and 4 each in Willesden, Nottingham, and Bootle. The deaths referred to scarlet fever, which had been 48, 34, and 30 in the three preceding weeks, were 31 last week, of which 10 belonged to London, 4 to Liverpool, and 2 to Sheffield. The fatal cases of enteric fever, which had been 17, 14, and 12 in the three preceding weeks, rose to 20 last week, and included 4 in London and 2 each in Portsmouth and Salford.

The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had declined from 5035 to 4583 in the five preceding weeks, had further fallen to 4503 on Saturday last; 436 new cases were admitted during the week, against 504, 451, and 348 in the three preceding weeks. These hospitals also contained on Saturday last 1686 cases of diphtheria, 70 of enteric fever, 59 of measles, and 40 of whooping-cough, but not one of small-pox. The 2050 deaths from all causes in London were 941 in excess of the number in the previous week, and corresponded to an annual death-rate of 23·7 per 1000. The deaths referred to diseases of the respiratory system, which had been 316, 314, and 270 in the three preceding weeks, rose to 562 in the week under notice, and were 282 in excess of the number recorded in the corresponding week of last year.

Of the 7395 deaths from all causes in the 97 towns, 299 resulted from different forms of violence and 727 were the subject of coroners' inquests, while 1915 occurred in public institutions. The causes of 80, or 1·1 per cent. of the total deaths, were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Salford, and in 66 other smaller towns. Of the 80 uncertified causes, 20 were registered in Liverpool, 19 in Birmingham, 6 in London, 4 in Sheffield, and 3 each in Stoke-on-Trent, Bootle, and Preston.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns 952 births and 791 deaths were registered during the week ended Saturday, Dec. 26th, 1914. The annual rate of mortality in these towns, which had been 18·3, 17·7, and 18·0 per 1000 in the three preceding weeks, was again 18·0 per 1000 in the week under notice. During the first 12 weeks of last quarter the mean annual death-rate in these towns averaged 16·5, against a corresponding rate of 14·4 per 1000 in the 97 large English towns. Among the several towns the death-rate in the week ranged from 5·1 in Kirkcaldy, 10·7 in Perth, and 10·8 in Hamilton, to 19·8 in Glasgow, 20·7 in Greenock, and 22·2 in Dundee and in Aberdeen.

The 791 deaths from all causes were equal to the number in the previous week, and included 77 which were referred to the principal epidemic diseases, against 76 and 81 in the two preceding weeks. Of these 77 deaths, 23 resulted from whooping-cough, 16 from diphtheria, 15 from scarlet fever, 12 from infantile diarrhœal diseases, 5 from measles, and 1 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·8, against 1·2 per 1000 in the 97 large English towns. The deaths attributed to whooping-cough, which had steadily increased from 7 to 35 in the six preceding weeks, declined to 28, of which 21 were registered in Glasgow and 5 in Dundee. The deaths referred to diphtheria, which had been 20, 16, and 9 in the three preceding weeks, rose to 16, and included 5 each in Glasgow and Aberdeen, and 2 each in Edinburgh and Dundee. The fatal cases of scarlet fever, which had been 15, 14, and 17 in the three preceding weeks, fell to 15, and included 8 in Glasgow and 5 in Aberdeen. The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 10, 8, and 15 in the three preceding weeks, fell to 12, of which 8 belonged to Glasgow. The 5 deaths referred to measles were 2 in excess of the average in the earlier weeks of the quarter, and comprised 4 in Dundee and 1 in Aberdeen. The fatal case of enteric fever occurred in Glasgow.

The deaths referred to diseases of the respiratory system, which had been 163, 154, and 169 in the three preceding weeks, further rose to 175 in the week under notice; 36 deaths resulted from different forms of violence, against 23 and 36 in the two preceding weeks.

In the 16 largest Scotch towns with an aggregate population estimated at 2,293,200 persons at the middle of 1914, 1098 births and 899 deaths were registered during the week ended Saturday, Jan. 2nd. The annual rate of mortality in these towns, which had been 17·7, 18·0, and 18·0 per 1000 in the three preceding weeks, further rose to 20·5 per 1000 in the week under notice. During the 13 weeks of the quarter just ended the mean annual death-rate in these towns averaged 16·8, against a corresponding rate of 14·9 per 1000 in the 97 large English towns. The annual death-rate last week ranged from 7·7 in Perth, 8·8 in Kilmarnock, and 8·9 in Kirkcaldy, to 23·9 in Glasgow, 27·4 in Greenock, and 30·2 in Dundee.

The 899 deaths from all causes were 108 in excess of the number in the previous week, and included 98 which were referred to the principal epidemic diseases, against 81 and 77 in the two preceding weeks. Of these 98 deaths, 44 resulted from whooping-cough, 17 from scarlet fever, 14 from diphtheria, 11 from infantile diarrhœal diseases, 10 from measles, and 2 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 2·2, against 1·7 per 1000 in the 97 large English towns. The deaths attributed to

whooping-cough, which had been 32, 35, and 28 in the three preceding weeks, rose to 44 last week, and included 27 in Glasgow, 6 in Dundee, 4 in Clydebank, 3 in Greenock, and 2 in Motherwell. The deaths referred to scarlet fever, which had been 14, 17, and 15 in the three preceding weeks, rose to 17 last week, of which 6 were registered in Glasgow, 5 in Aberdeen, and 3 in Paisley. The fatal cases of diphtheria, which had been 16, 9, and 16 in the three preceding weeks, fell to 14 last week, and included 4 in Edinburgh, 3 in Glasgow, and 2 each in Aberdeen and Motherwell. The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 8, 15, and 12 in the three preceding weeks, were 11 last week, of which 4 belonged to Dundee and 3 to Glasgow. The 10 deaths referred to measles were 7 above the average in the earlier weeks of the quarter, and included 8 in Dundee. The 2 fatal cases of enteric fever were registered in Glasgow.

The deaths referred to diseases of the respiratory system, which had been 154, 169, and 175 in the three preceding weeks, further rose to 210 in the week under notice; 42 deaths resulted from various forms of violence, against 36 in each of the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland 383 births and 393 deaths were registered during the week ended Saturday, Dec. 26th, 1914. The annual rate of mortality in these towns, which had steadily increased from 17·7 to 21·8 per 1000 in the six preceding weeks, fell to 17·0 per 1000 in the week under notice. During the first 12 weeks of last quarter the mean annual death-rate in these towns averaged 18·0, against corresponding rates of 14·4 and 16·5 per 1000 in the English and Scotch towns respectively. The annual death-rate during the week was equal to 16·4 in Dublin (against 12·8 in London and 19·8 in Glasgow), 22·0 in Belfast, 14·3 in Cork, 11·4 in Londonderry, 13·5 in Limerick, and 9·5 in Waterford, while in the 21 smaller towns the mean death-rate was 12·5 per 1000.

The 393 deaths from all causes were 110 fewer than the number in the previous week, and included 32 which were referred to the principal epidemic diseases, against 43 and 46 in the two preceding weeks. Of these 32 deaths, 9 resulted from measles, 9 from infantile diarrhœal diseases, 5 from whooping-cough, 3 each from scarlet fever, diphtheria, and enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·4, against corresponding rates of 1·2 and 1·8 per 1000 in the English and Scotch towns respectively. The deaths attributed to measles, which had been 8, 12, and 8 in the three preceding weeks, numbered 9, and were all registered in Belfast. The deaths of infants (under 2 years) referred to diarrhœa and enteritis, which had been 12, 17, and 15 in the three preceding weeks, fell to 9, of which 5 occurred in Dublin. The fatal cases of whooping-cough, which had been 4, 3, and 5 in the three preceding weeks, were again 5, and were all recorded in Belfast. The deaths attributed to scarlet fever, which had been 8, 8, and 10 in the three preceding weeks, fell to 3, but showed no excess in any town. The 3 deaths referred to enteric fever, of which 2 occurred in Dublin and 1 in Sligo, were equal to the average in the earlier weeks of the quarter. Of the 3 fatal cases of diphtheria, 2 were recorded in Dublin and 1 in Cork.

The deaths referred to diseases of the respiratory system, which had been 90, 120, and 105 in the three preceding weeks, further fell to 96 in the week under notice. Of the 393 deaths from all causes, 97, or 25 per cent., occurred in public institutions, and 9 resulted from various forms of violence. The proportion of uncertified causes of death was equal to 4·1, against 1·1 per cent., in the 97 English towns.

In the 27 town districts of Ireland with an aggregate population estimated at 1,205,280 persons at the middle of 1914, 649 births and 643 deaths were registered during the week ended Saturday, Jan. 2nd. The annual rate of mortality in these towns, which had been 21·1, 21·8, and 17·0 per 1000 in the three preceding weeks, rose to 27·8 per 1000 in the week under notice. During the 13 weeks of the quarter just ended the mean annual death-rate in these towns averaged 18·8, against corresponding rates of 14·9 and 16·8 per 1000 in the English and Scotch towns respectively. The annual death-rate last week was equal to 35·2 in Dublin (against 23·7 in London and 23·9 in Glasgow), 23·1 in Belfast, 30·6 in Cork, 22·8 in Londonderry, 28·4 in Limerick, and 51·3 in Waterford, while in the 21 smaller towns the mean rate did not exceed 19·5 per 1000.

The 643 deaths from all causes were 250 in excess of the number in the previous week, and included 42 which were referred to the principal epidemic diseases, against 46 and 32 in the two preceding weeks. Of these 42 deaths, 10 resulted from infantile diarrhœal diseases, 9 each from measles and scarlet fever, 7 from whooping-cough, 4 from enteric fever, and 3 from diphtheria, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·8, against 1·7 and 2·2 per 1000 in the English and Scotch towns respectively. The deaths of infants (under 2 years) attributed to diarrhœa and enteritis, which had been 17, 15, and 9 in the three preceding weeks, were 10 last week, of which 8 were registered in Dublin. The deaths referred to measles, which had been 12, 8, and 9 in the three preceding weeks, were again 9 last week, and comprised 8 in Belfast and 1 in Queenstown. The fatal cases of scarlet fever, which had been 8, 10, and 3 in the three preceding weeks, rose to 9 last week, and included 4 in Waterford and 2 each in Dublin and Belfast. The 7 deaths attributed to whooping-cough, of which 4 occurred in Dublin and 2 in Belfast, were 3 in excess of the average in the earlier weeks of the quarter. Of the 4 deaths referred to enteric fever, 2 each were registered in Dublin and Belfast. The 3 fatal cases of diphtheria included 2 in Dublin and 1 in Belfast, and were equal to the average in the earlier weeks of the quarter. In addition to the above, a death from typhus occurred in Waterford.

The deaths referred to diseases of the respiratory system, which had been 120, 105, and 96 in the three preceding weeks, rose to 162 in the week under notice. Of the 643 deaths from all causes, 196, or 30 per cent., occurred in public institutions, and 7 resulted from different forms of violence. The causes of 37, or 5·8 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 97 English towns the proportion of uncertified causes did not exceed 1·1 per cent.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Licence Fees of Mobilised Medical Men.

A DELEGATION from the Société Centrale and from the Association Générale des Médecins de France attended recently at the office of direct taxation at the Ministry of Finance to call attention to the situation of mobilised doctors in regard to their licence fees during the years 1914 and 1915. It was stated in reply to the delegation's representations that it was impossible to make any abatement for 1914, but that mobilised medical men whose usual residence was in Paris would not appear on the register of practitioners for 1915 or during the period of hostilities, and that provincial practitioners should apply to the director of direct taxation of the province for a discharge, which would be favourably considered in every case. This measure is indeed only just. In Paris, especially, all the medical men have to pay for their licence to practice a heavy fee in proportion to their rent. Since, however, during mobilisation their emoluments are entirely inadequate to compensate them for the loss caused by the abandonment of their practice, it is not right that they should be called on to pay the fee for their licence.

Hygiene in War Devastated Areas.

In the fighting area and in regions under military occupation hygienic knowledge is indispensable. When the dispossessed inhabitant returns to his village a great danger arises from the sources of contamination that every battle or the long occupation by troops leaves behind. It is necessary, therefore, that all such country should be purified, for the sources of infection are innumerable. A deputy from the Ardennes, Dr. Doisy, who has returned from a visit to the battle area of the Marne, gave an address on this subject in a conference organised by the Alliance d'Hygiène Sociale. He pointed out that the first difficulty encountered by the military sanitary service had consisted in the vastness of modern battlefields; another in the season of the year and the high temperature which still prevailed at the beginning of September. This explained why the burials had been conducted in such an inadequate manner, why disinfectants gave out, and why it was now necessary to secure protection against grave dangers. This whole region of bloody battlefields must be visited and probed

to make sure that no corpses remained unburied. Imperfect burials are a source of great danger by polluting springs and wells. For a long time the inhabitants must use only boiled water or water sterilised by the addition of hypochlorite of lime. The graves must be visited and covered with lime, and should even be surrounded by a deep trench containing lime. The fields of battle also must be sprinkled with disinfectants, for they are still covered with débris of all kinds. The dwellings that have been occupied by the enemy have the floors of the houses and the soil of the garden still strewn with foul débris. The pollution of the waters and the dust raised in cleaning up are also to be feared. The Bureau of Hygiene in the Ministry of the Interior has given the prefects the necessary instructions. Rigid surveillance of foodstuffs, milk and meat, must be practised. For the rebuilding of the destroyed dwellings it will be necessary at first to raise shelters, for often the basements are all that remain for those who return. Later, when the villages are rebuilding it will be necessary to watch the cubic air space allowed for the rooms, and the height of the buildings, and to see that acknowledged necessary modifications are introduced. Attention must also be paid to prophylaxis and treatment of disease, and to disinfection, for epidemics are especially to be feared among those in a lowered state of health. Attention to these matters is urgently demanded.

A Gift in Memory of Dr. Reymond.

Madame Reymond, widow of the Senator Dr. Reymond, a médecin-major of the 1st Class, who was mortally wounded during an aeroplane reconnaissance,[1] has offered to the Army the flying machine with which that heroic officer practised during peace time. The offer has been accepted.

Obituary Notes.

Professor Alfred Fournier died recently at the age of 81. During his long career he added lustre to the chair of the dermatological clinic at the Hôpital Saint Louis. A pupil of Ricord, he devoted himself to the study and treatment of syphilis. His descriptions of this disease, hereditary or acquired, are perfect. His entire teaching concerning the effects of the disease on the different organs, and especially on the nervous centres, remains correct to this day. He pointed out the specific character of locomotor ataxy and established the certainty of a similar origin for progressive general paralysis. By making known their origin Fournier showed how to avoid them. At the Hôpital Saint Louis he founded a school, organised a remarkable museum, and collected a huge number of precious specimens.—Last week also died another highly esteemed medical man whose name will live in French science, Dr. Lucien Jacquet. He was physician to the Hôpital Saint Antoine and a specialist in dermatology, and had published important works on diseases of the skin. He demonstrated that alopecia was not an infectious disease, but a trophic disturbance affecting the nerves and local nutrition. He devised a method for combating baldness, wrinkles, fatigue, and premature senility. He made investigations into the importance of thorough mastication. He had recently applied his methods to the alleviation of fatigue in troops after prolonged marches. For 20 years he carried on an intelligent and discriminating campaign against alcoholism.

Jan. 4th.

[1] THE LANCET, Oct. 31st, 1914, p. 1065.

Correspondence.

"Audi alteram partem."

CRIMINAL ABORTION AND PROFESSIONAL SECRECY.

To the Editor of THE LANCET.

SIR,—In your last issue you raised a very important and delicate question in a leading article relating to the action of a medical practitioner as regards cases of abortion which may come under his professional care. In considering this subject it is well to bear in mind that abortion from natural causes is an extremely common occurrence, and that cases of criminal abortion are fortunately of rare occurrence. Every medical practitioner attending a case of abortion is perfectly justified in regarding the case as one of natural abortion unless he has definite objective evidence to the contrary, which he can see for himself without asking any questions. In attending a case of abortion where there is no conclusive objective evidence of criminal interference the medical practitioner will be wise to regard the case as one of natural abortion, and any questioning on his part as to the possibility of any criminal cause is most strongly to be deprecated. It is undoubtedly the medical man's duty to do the best he can for his patient, and any action on his part in the nature of detective inquiry is to be condemned. The medical practitioner will wisely refrain from putting questions to his patient or receiving information from her which will throw upon him the difficult burden of "professional secrecy."

If a patient desires on her own account to disclose certain facts it would be wise for the medical practitioner to caution his patient, and to allow her to take such steps on legal advice as she thinks fit, provided, of course, that her health is not endangered. There is no need for the practitioner to be a party to these proceedings.

A class of case sometimes occurs where the medical practitioner cannot play a passive part. I refer to cases of abortion where there is conclusive objective evidence of criminal interference. Several such cases have come to my notice. Examples of such cases are as follows. Visible perforating wounds of the cervix uteri or of the roof of the vagina. Marked signs of the action of a corrosive agent on the cervix uteri or vagina. Perforating wounds of the uterus or vagina revealed at operation on the patient. In cases of this kind the medical practitioner who takes no steps at all is unwisely throwing upon himself a grave responsibility which may lead to serious trouble to others as well as to himself. In such cases the medical practitioner should insist on consultation with a specialist, and if they jointly agree that there is conclusive objective evidence of criminal interference, irrespective of any statements made by the patient, then undoubtedly some steps must be taken—e.g., in a desperate case, where there was no hope of recovery on the part of the patient, opportunity should be given the patient of making a dying declaration. In less desperate cases, provided only that this procedure is not detrimental to the health of the patient, the legal authorities should be informed and opportunity given for a statutory deposition to be taken. In every case the health and possible recovery of the patient should occupy

the foremost place, and the medical practitioner in charge of a patient will be right in permitting no steps to be taken which are dangerous to her life or detrimental to her condition of health.

In cases of abortion where, after consultation with a specialist, it is decided that there is conclusive objective evidence of criminal interference, quite irrespective of any statements made by the patient, then there is no doubt that the duty rests with the medical practitioner to inform the legal authorities. His duty to the public and to himself must, I think, in such cases override any obligation of secrecy arising out of the confidential relationship to which a doctor stands towards a patient.

I am, Sir, yours faithfully,

W. H. WILLCOX, M.D., F.R.C.P.

Welbeck-street, W., Jan. 5th, 1915.

INSOMNIA AND SUICIDE.

To the Editor of THE LANCET.

SIR,—The paper by Mr. C. E. Pronger under the above title in your issue of Dec. 12th, 1914, has brought into prominence what some of us have been preaching for years, and it has seemed as if the preaching were in vain. The medical profession allows that there is such a thing as eyestrain, and that the correction of errors of refraction may cure headaches, and there many appear to stop, and do not realise that if eyestrain can cause headaches, why not also numerous other forms of reflex irritation or waste of nerve energy—in fact, any "functional" nerve disorder? When some years ago Gould, of Philadelphia, published his "Biographic Clinics" and illustrated the enormous harm that uncorrected astigmatism could do and had done, he was laughed at and called a madman, and yet those who have followed in his footsteps look up to him as a pioneer in ophthalmology second only to the great Donders.

If small errors of refraction may play such an important rôle it will be surely asked why the profession generally have not accepted the fact, and the answer is because a large majority of the *oculists* themselves have not done so. They laugh at the man who corrects 0·12 D. of astigmatism or 0·25 D. of anisometropia, and almost infer that he is "next door" to a quack. We are so conservative in the medical profession and forget that the only form of conservatism for us is to conserve what is good. As soon as one of us opens a new door and lets in a new light it seems as if the whole profession did their best to close the door instead of helping to open it wider.

The explanation of this attitude is not far to seek in the subject under discussion. It is that the "older school" have failed to recognise the paramount importance of the use of cycloplegics in this particular work. Very low errors of astigmatism or of anisometropia, such as 0·12 D., 0·25 D., 0·37 D., and possibly 0.5 D. play the chief rôle in causing nervous disorder in a particular class of nerve patient. These low errors, and only these low errors, can be corrected unconsciously by the patient, and are only fully revealed when a cycloplegic is used in all under 45 (and in some cases 50) years of age. Homatropine generally suffices for the older patients, but atropine must be used for all up to the age of 25 or even 30. The masking of the defect enables the patient to have apparently normal vision, and he is totally unconscious of, and very often indignant at the mere suggestion of, defective vision. This unconscious correction of small errors must always lead to waste of nerve energy, but in the robust it may never manifest itself, or the manifestation may be long delayed, but in those whose nervous organisation is of a more delicate character it very soon shows itself in some form of functional nerve disorder—insomnia, depression, suicide, drug taking, alcoholism, dyspepsia, &c.

Having found the defect—and in doing this the ophthalmometer is a priceless servant—the logical treatment is the prescription of the correction for constant use, and herein we perform a double good, for not only do we remove the symptoms, but also the cause, for in the younger patients the removal of the eyestrain tends to the disappearance of the error. I have heard it said that most of the cures are the result of "suggestion"; it is possible that an occasional case does occur of such a class, but suppose suggestion were the cure in all, is that an argument against the treatment? Is not our one and only aim to cure the patient? It should be remembered that the cases referred to above only occur very sparsely in hospital work, they must be looked for in the upper classes, especially in the professional classes. Some of the most typical cases I have seen have been members of our own profession. Women at the climacteric are especially prone to this form of eyestrain, the oncoming presbyopia added to the static error increasing the trouble or starting it. The opticians' art has rendered a lasting benefit by inventing the invisible bifocal glass, wherein the upper portion corrects the static error and the lower portion the same, plus the presbyopia.

If the good that men do in this world is gauged by the benefits it confers on the race then the oculist who does his refraction work sensibly and carefully must have the consciousness of being a large benefactor.—I am, Sir, yours faithfully,

Chandos-street, W., Jan. 1st, 1915. ERNEST CLARKE.

To the Editor of THE LANCET.

SIR,—If it be true, as suggested by Mr. C. Ernest Pronger in THE LANCET of Dec. 12th, 1914, that errors of refraction play a part in the production of habitual insomnia, it only affords another proof of the fact that this distressing condition is often dependent upon trifling disturbances of physiological equilibrium. Nothing, for instance, is more fatal to a good night's rest than going to bed with a loaded rectum, especially in presence of a tendency to flatulence, because this tends to excite peristalsis and wakefulness. A glycerine suppository or injection under these conditions will exert distinctly hypnotic effects. An empty stomach is also adverse to sleep and should be combated by a biscuit or a cup of warm milk on retiring, these being far more efficacious than the customary alcoholic nightcap. Then, too, there is the question of having the head high or low, which is a matter of personal idiosyncrasy. A cold bedroom is more conducive to sleep than one artificially heated, and free ventilation, provided no cold air impinge directly on the exposed surfaces, is favourable to deep, refreshing sleep. The use of a feather bed or unduly thick, heavy bedclothes, by overheating the body, produces restlessness, and in elderly men is apt to cause bladder irritability, with consequent disturbance of rest. Another frequent cause of troubled nights is the practice of taking a heavy meal late in the day with too short an interval between the meal and the hour for retiring to rest.

In sleeplessness due to gastro-intestinal restlessness a few drops of peppermint or spirit of camphor or a wineglassful of orange-flower water will often exert a quasi-hypnotic effect.

Whatever the effect of errors of refraction it is certain that insomnia results from many other small causes.—I am, Sir, yours faithfully,

ALFRED S. GUBB, M.D.

No. 15 Auxiliary Hospital, Aix-les-Bains.

CIVIL MEDICAL PRACTICE AND THE WAR.

To the Editor of THE LANCET.

SIR,—The statistics in THE LANCET of Dec. 26th last, as given by the President of the General Medical Council, would have been still more interesting if they had shown the percentage of decrease in each class of medical students, and also if they had set out the actual numbers in ordinary times of the excess over those removed by death, &c., which, of course, is sure to be larger this year. As Sir Donald MacAlister says the whole question calls for consideration, I may be permitted as an old member of the General Medical Council to make a humble suggestion as to how the deficiency of doctors might for a time at least be met.

While I agreed at the time to the addition of a fifth year to the medical curriculum, I and others did so on the clear understanding that the additional year should be devoted *wholly* to clinical—i.e., practical—work. It is notorious that this has not been so. The fifth year as a rule has been appropriated by further study, and comparatively little has been left for taking charge of individual patients as house surgeon's or house physician's clerk, or as *pupil* assistant. Wherever we turn the state of war has of necessity altered existing arrangements, and new ways of going to work have had to be considered. Not only many medical students but many medical men have gone "to the front." While it is true that in their absence their neighbours have generously looked after their patients, or locum-tenents have been found to take their place, I fear at great expense, yet both the patriotic practitioner and the public have suffered from this dearth of doctors. This being so, for the good of all, and I firmly believe without detriment in the interests of real medical education, a large proportion of fifth-year students (including during war hospital internes) might be allowed to act as unqualified assistants for the time being, and afterwards to go up for their final examination before being admitted to the Medical Register on producing a certificate that their time on probation had been conscientiously spent—in other words, that "their apprenticeship" had been profitably accomplished.

If the result of this temporary experiment were found to be satisfactory, then the same system might be continued after the war was over, and the coming scarcity of doctors would be met. It would be the means of adding, if not quite a fifth year by year, at least a tenth to the working army of the profession.

I am, Sir, yours faithfully,

Dingwall, Jan. 4th, 1915. WILLIAM BRUCE, M.D.

PS.—Since the foregoing was written I have carefully perused both Sir Donald MacAlister's further letter and the able report of Dr. Norman Walker's speech at Glasgow. The thanks of the profession for the trouble taken by these gentlemen are most heartily due. As you say the new order of the War Office, for which we have to thank the President and the Medical Council, will in many cases greatly relieve the situation for the time being, while the action of Dr. Walker and his committee is sure to bear good fruit. All the same, practically nothing is being done to meet the deficiency in numbers which Dr. Walker clearly shows must go on increasing. Whereas by shortening the term of academic residence a very considerable addition, as I have said, would be effected to the whole body of medical practitioners were it to include those fully licensed and those in process of being qualified for registration.

To the Editor of THE LANCET.

SIR,—The prospective diminution of our reserve supply of medical men will perhaps call attention to the question if we are making the best use of the abilities of the men we have already qualified. Apart from the Scottish-born student, who can if he thinks fit get his training at the expense of the Carnegie Trust, the cost of the curriculum to the English trained student may run to anything from £500 to £1000. After qualifying, if the student has a capital of £1000 to £1500 his course will be plain sailing. But what are the restrictions on others who have not this reserve? They are brought up against restriotions of a commercial kind, for the most part framed to protect the business or trading interests of the established practitioner. Hence the legal bond not to practise within ten miles of a place where a qualified practitioner may have been compelled from economic circumstances alone to accept a subsidiary position. If the qualified practitioner sets up in practice on his own, so to speak, he is again met with the restrictions of the insurance doctors, whose panel patients cannot change their attendant more than once a year, and then only by a very troublesome clerical procedure. So that unless the young qualified man can get together some £2500 and spend many years getting his capital back, he may very well think twice before taking up the occupation. There is more in the question surely than our academicians can alter or control. I am, Sir, yours faithfully,

Burnley, Dec. 26th, 1914. JAMES I. HALSTEAD.

MAGNESIUM SULPHATE IN TETANUS.

To the Editor of THE LANCET.

SIR,—In connexion with the great prevalence of tetanus among the wounded soldiers in France and the inefficiency of tetanus antitoxin except as a prophylactic, allow me to call the attention of your readers to the great service of magnesium sulphate administered by hypodermoclysis in from 1 to 2 per cent. solution, in quantities and at intervals depending upon the severity of symptoms—a pint to a quart even every three hours if necessary. I inclose for your perusal a copy of the notes of two cases I reported some years ago.[1]

The effect of this salt in solution, administered intraspinally as an anticonvulsant, is generally well known; but that the same result may be obtained with much greater ease and safety by employing dilute solutions in large amounts hypodermatically is, I think, not recognised, and might, I am sure, at this juncture prove of great service. I venture to urge its trial extensively, especially where established measures have failed.

I am, Sir, yours faithfully,

Brooklyn, New York. H. GREELEY, M.D.

[1] Journal of the American Medical Association, 1907, vol. xlix., pp. 940-1.

VACCINES AND THE GERMAN RAID: A USEFUL ANALOGY.

To the Editor of THE LANCET.

SIR,—Dr. F. C. Eve's letter in THE LANCET of Jan. 2nd shows in picturesque language the closeness of the analogy between the effect of a vaccine on the resisting power of a patient and the effect of a raid on the resisting power of this country. I suppose that all of us who have been busy inoculating soldiers and nurses against typhoid since the war began have been making daily use of this illustration. When the patient asks what is the vaccine expected to do, one can invite him to consider the effect of a German raid on our east coast in times of peace, drawing a picture of the bustle at the War Office, the activity of the local authorities, the movement of troops by road and rail, and above all the prompt enlistment of recruits. So far we are agreed that the illustration is a very useful one; it is when it is stretched to provide arguments against inoculating in a general infection that I think it ceases to fit the facts. In a systemic infection the body is not necessarily "swamped with toxins," but, at any rate in the commencement, is semi-poisoned with toxins or bacterial substances scattered throughout it. The parallel is the case of England permeated with spies and potential enemies, citizens of a foreign power. Dr. Eve assumes that in such a condition of systemic infection all the defences are thoroughly aroused. We know that this is not true in the case of England; I believe that it is not necessarily true in the case of the body. Both are lethargic; neither may have mobilised their full resources though the danger is urgent. The reason in both cases is, I think, that the danger though urgent is diffuse. Nowhere is it concentrated; nowhere is it sufficient to stimulate the locality into resistance. In such a case the east coast raid (or an inoculation) would provoke a powerful local stimulus, and this may break down the lethargy and help to stimulate defence against the hidden danger within. The more the country is permeated with enemies, or the more the body is permeated with bacterial substances, the greater is the difficulty or danger of stimulating a local production of protective powers; yet such protective powers must be produced or the body will die.

Of course, in the extreme case supposed by Dr. Eve, all the country being "swamped with toxin" (i.e., a million or more German soldiers being in full possession of the country), the human body, or the body politic, would be moribund, and any inoculation would be far too late. These analogies can only serve to illustrate one's point of view; they can never provide arguments for that point of view.

I am, Sir, yours faithfully.

Devonshire-place, W., Jan. 4th, 1915. J. FREEMAN.

WHAT IS STRUMA?

To the Editor of THE LANCET.

SIR,—Virchow once described "struma" as an "abnormal vulnerability of the tissues," a definition, be it observed, which does not imply any connexion with tuberculosis. Accepting, then, for argument's sake this definition as correct, the logical inference is that strumous-looking persons are merely those whose tissues form an admirable cultivation medium for many pathogenic organisms, but most of all for the tubercle bacillus. The latter, being the most ubiquitous, has possibly the best opportunity for infecting the favourable soil, and thus it may be that strumous-looking persons actually become the subjects of tuberculosis for the reason that their tissues happen to offer the least resistance to the cultivation attempts of this particular bacillus. Meanwhile, the strumous-looking person is one whose "abnormal vulnerability" depends upon hypothyroidism, the signs of which cease under thyroid treatment.

I am, Sir, yours faithfully,

Wimpole-street, W., Jan. 4th, 1914. PERCY DUNN.

TWO UNLOOKED-FOR EFFECTS OF DRUG EXCRETION.

To the Editor of THE LANCET.

SIR,—The two following cases came to my notice while acting as medical officer of a submarine cable company. Before describing them I must say a word about the structure of a cable. In the middle is a core of copper wire surrounded by a layer of guttapercha insulation. This in turn is surrounded by a layer of brass tape spirally wound, and outside of this a layer of hemp and one of galvanised steel wires, the whole being surrounded by an outermost coat of guttapercha composition. Now in repairing a "fault" it is necessary to cut out the fault and joint a new piece in. The jointing is done by special men and is a business requiring considerable skill and practice. The most important parts of the job are the soldering of the copper core and the efficient application of the insulating guttapercha. The jointers put this on hot and a little at a time, forming layer upon layer; and as each layer is rubbed on they make use of their saliva to rub it smooth and to make it fix in with or adhere to the one before.

I can tell now of my two cases. One was a jointer who was under treatment for syphilis and was saturated with mercury, and the other was suffering from gonorrhœa and had treated himself lavishly with "santal-midi" capsules. In both cases the joints made by these men broke down—a somewhat serious matter when you come to consider the cost of submarine cable repairing. The reason I can only speculate on; doubtless some of your readers can explain it better than I can. My theory is this: that in the mercurial case there was sufficient mercury excreted in the saliva to make the insulation a partial conductor; in the other case, that the oil in the saliva kept the layers of gutta percha from binding together, for when the joints made by this man were reopened the insulation could be peeled off in thin flakes. Both cases are, I think, sufficiently interesting to merit a record.—I am, Sir, yours faithfully,

E. C. HARDWICKE, M.R.C.S. Eng.,
L.R.C.P. Lond.

Nov. 11th, 1914.

COLOUR SENSE IN RELATION TO NERVOUS STAMMER.

To the Editor of THE LANCET.

SIR,—During the past seven years 60,000 candidates for employment in the railway service of this State have been examined in this office, the examination in each case including a test for colour sense by Holmgren's wools and the Williams' lantern, and during the past five years by the modified Williams' lantern. Of these candidates 0·18 per cent. had a nervous stammer sufficiently

in evidence to impair their usefulness as railway servants and to reject them. I can recall no instance in which a man rejected for a nervous stammer was also found to be red-green blind. During the past three years I have carefully watched for such a combination. There is a complete record of all cases examined in this office. In one case only was a man rejected for defective colour sense who also had a nervous stammer. He was normal by Holmgren's wools, but he named pale green white in the lantern. Unfortunately at that time I had no knowledge of the value of either Stilling's or Nagel's test and therefore cannot state the real value of his colour defect. From this evidence it is at least probable that a nervous stammer is much rarer in colour-blind persons than in colour-normal persons.

I am, Sir, yours faithfully,

GEORGE HENRY TAYLOR,
Railway Medical Officer.

Medical Officer's Office, New South Wales Government Railways and Tramways, Sydney, Nov. 11th, 1914.

THE ABUSE OF TEA.

To the Editor of THE LANCET.

SIR,—While conducting investigations into the dietary of the labouring classes I have been most forcibly impressed by the injurious effects of excessive tea-drinking amongst them. Tea is the invariable accompaniment of every meal, and as though this were not sufficient it is frequently drunk between meals. The effects of this over-indulgence, though noticeable on all sides, are particularly pronounced in the case of nursing and expectant mothers. the general disturbance of nutrition, in addition to local digestive troubles, being accentuated in them. I feel sure that the abuse of tea is one of the most potent causes of the inability of the women to suckle their babies, and is thus an indirect cause of a high infantile mortality. In Birmingham during the hot weather 30 times more bottle-fed babies die than those breast-fed, and among the survivors the bottle-fed are at a great disadvantage as compared with the naturally fed babies. In my work at Birmingham I have therefore sought to find a substitute for tea. It is of no use to counsel moderation and advance the virtue of plain water; the poor refuse to consider such a change. Cocoa, however, has proved in practice an acceptable alternative to them, and I am satisfied as to the good results which accrue to the mother and the children when cocoa is substituted for tea as the family beverage. It seems to me that the present is a favourable time for urging a general reform in this direction—first, because the price of tea has increased beyond that of cocoa; and secondly, because the people are now more open to receive and follow advice with regard to their food. I should be much obliged if you could give publicity to this matter, which, though it may appear trivial, is, I am convinced, of national importance. I am, Sir, yours faithfully,

Birmingham, Dec. 29th, 1914. A. E. CARVER, M.D.

TENDIMUS HUC OMNES.

To the Editor of THE LANCET.

SIR,—We are all aware that "to every man upon this earth death cometh soon or late," but the usual impression is that the man whose profession is fighting runs a greater risk than the civilian, and when he enters on a campaign, that his chances of escaping from "this muddy vesture of decay" are appreciably increased. An American statistician has, however, stated that "ominous as are the soldier's dangers in war, they are really but little greater than are the civilian's dangers of dying before he has time to set aside the necessary nest egg for his dependents." By comparing the statistics of the four considerable wars of the last 50 years—namely, the American Civil War, the Franco-German War, the South African War, and the Russo-Japanese War of 1904–05—he finds that the average mortality from all causes, including the killed in battle and the deaths from wounds and disease, amounted to 90·1 per 1000 per annum; in the Civil War it was yet higher; in the South African War it was only 40·2. The deaths from disease were practically double those from wounds in the Civil War (66 compared with 32·5) and in the South African War (26 compared with 14·3); the proportions were reversed in the Franco-German War (28·8 and 67·7) and in the Japanese War (25·1 and 54·2). Mr. E. B. Phelps, editor of the *American Underwriter*, of New York, whose figures I am quoting, calculates that if the present war continues for a full year, the number of men engaged amounting to five, or possibly six, millions, it will cost more lives than all causes will demand among the entire adult male population of the United States. But he then says that, as a matter of experience, the chances of even the youngest man of marriageable age living long enough to set aside the most modest competence for his family when he is gone are not much better than are the soldier's chances in time of war; instancing, as an example, that whereas out of 92,637 young men, aged 20, engaged in war 84,290 might be expected to be alive at the end of a year's fighting; out of the same number of men of that age engaged in ordinary occupations not more than 84,000 would survive to 32 years of age. By a similar comparison he finds that the fighting soldier's chance is better than that of a civilian of 30 surviving to 41, of 40 surviving to 49, or of 50 to 56. These figures are rather startling, and would indicate that the soldier's dangers in war are really but little greater (and in some cases actually less) than are the civilian's chances of dying before he has time to set aside the necessary provision for those dependent on him. The bearing of this observation lies in the application of it, which is, of course, that everyone should insure his life, and that the earlier he begins the better bargain he will make. I am, Sir, yours faithfully,

Jan. 4th, 1915. A. M. D.

Medical News.

UNIVERSITY OF LONDON.—At the First Examination for Medical Degrees held recently the following candidates were successful:—

Gerald Victor Wright Anderson, University of Bristol and University College (distinction in physics); Maurice Aronsohn, London Hospital; Terence John Doyle Atteridge, St. Bartholomew's Hospital; Julia Bell, London (Royal Free Hospital) School of Medicine for Women; Thomas George Doughty Bonar, Hymers College, Hull; Jean Auguste André Bouic, Guy's Hospital; Sarah Aileen Florence Boyd-Mackay, London (Royal Free Hospital) School of Medicine for Women; Norman Carwardine Cooper, University of Bristol; Ursula Beatrice Cox, London (Royal Free Hospital) School of Medicine for Women; Carl Knight Cullen, London Hospital; José Joaquim da Gama Machado, St. Bartholomew's Hospital; Edith Margery Pearce Davies, London (Royal Free Hospital) School of Medicine for Women; Thomas Davies, B.Sc., University College, Aberystwyth, and private study; John Joseph Philip de Chaumont, King's College; Jacob Franks, London Hospital; Dorothy Margaret Greig, The Grove School, Highgate, and Northern Polytechnic Institute; Magdalena Augusta Hilda Hamel, London (Royal Free Hospital) School of Medicine for Women; Christopher Langton Hewer, University College School and St. Bartholomew's Hospital; Arthur

St. Geo. Joseph M. Huggett, S.W. Polytechnic Institute and St. Thomas's Hospital; Herbert Vivian Jackson, University of Bristol; Jerusha Jacob Jhirad, Grant Medical College, Bombay, and private study; David Lavington Glyde Joseph, Charterhouse and Guy's Hospital; John Wilfred Joule, St. Paul's School; Ernest Francis Kerby, Guy's Hospital; Maurice Edmund King, University College; Maurice Laurent, University Tutorial College (distinction in inorganic chemistry); Tercsa Jadwiga Lesser, London (Royal Free Hospital) School of Medicine for Women; Glyndwr Morison Lewis, University College; Douglas McClean, Berkhamsted School and St. Thomas's Hospital; Murdo Mackenzie, Guy's Hospital; Arthur George Abraham Miller, B.Sc., Middlesex Hospital; John Clifford Rowland Morgan, University College, Cardiff, and private study; Robert Gordon Morrison, Epsom College and St. Thomas's Hospital; William Drew Nicol, St. Bartholomew's Hospital; Robert Hughes Parry, Middlesex Hospital; Percival George Quinton, University College; Arthur Hywel Richards, Epsom College; Esther Rickards, Birkbeck College; Jessie Craig Ritchie, London (Royal Free Hospital) School of Medicine for Women; Frank Paul Schofield, St. Bartholomew's Hospital and private study (distinction in physics); Marguerite Garnett Sheldon, University of Liverpool and private tuition; Satyavan Singh, University College; Victor Alexander Trevor Spong, Dulwich College and St. Bartholomew's Hospital; Horace Rees John Thomas and John Phillip Traylen, London Hospital; and Reginald Frank White, University of Bristol.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

ROYAL MEDICAL BENEVOLENT FUND.—At the last meeting of the committee 29 cases were considered and grants amounting to £237 were voted to 25 of the applicants. The following is a summary of the cases relieved:—

Widow, aged 74, of M.R.C.S. Eng. who practised at Braintree. Husband died 23 years ago and left her without means. She has managed to support herself, but unable to save, until incapacitated by old age. Lives with married son, who has three children and only a small salary. Voted £2 and referred to the Guild.—M.R.C.S. Eng. and L.R.C.P. Lond., aged 48, who practised in Lancashire. Has become blind. Married; two children. Wife and children live with relatives. Wants a little help to obtain some training in massage. Voted £10 and referred to the Guild.—Widow, aged 56, of L.S.A. Lond. who practised at Bournemouth. At her husband's death in 1913 was left without any income and unable to obtain suitable employment. Only income 10s. per week from the Society of Apothecaries. Voted £12 in six instalments and referred to the Guild.—Daughter, aged 45, of M.D. Edin. who practised at Southampton. Trained as a midwife, but recently had to undergo a serious operation and has been ten weeks in bed. Voted £10 in two instalments and referred to the Guild.—Daughter, aged 40, of M.D. St. And. who practised at Swinton, Lancs. Was a teacher, but underwent a severe operation in September, 1913, and has not been able to work since. Mother has only a small annuity and has to keep an invalid son. Voted £18 in 12 instalments.—Daughter, aged 68, of M.R.C.S. Eng. who practised in London. Has been a teacher for 40 years in England, Russia, and Germany. On account of the war had to return from Moscow four months ago, where she had been in one post for seven years. All her savings were in the Deutsche Bank, Berlin, and could not obtain any. Voted £12 in 12 instalments and referred to Guild.—Widow, aged 66, of M.R.C.S. Eng. who practised at Heywood, Lancs. Has endeavoured to earn a living by acting as housekeeper and cook, but owing to age and the war finds it impossible at present to obtain a suitable post. Voted £2 and referred to the Guild.—Daughter, aged 74, of M.R.C.S. Eng. who practised in London. Up to quite recently has acted as a church visitor at £35 per annum, but owing to age has had to give it up. Has a small pension from the Mercers' Company. Voted £12 in 12 instalments.—Daughter, aged 47, of M.D. St. And. who is too old to practise and too poor to help. Earned her living as a teacher until three months ago, when owing to internal trouble had to enter a nursing home, and now all her savings are gone. Voted £5 and arrangements to be made to have the applicant operated upon.—Widow, aged 40, of M.R.C.S. Eng. and L.R.C.P. Lond. who practised at Norwood. Husband died quite suddenly from typhoid, leaving the applicant and three young children in straitened circumstances. Voted £5.—Daughter, aged 50, of M.R.C.S. Eng. who practised at St. Clears. Has double curvature of the spine. Lives with mother, who is a pensioner of the Fund, and two delicate brothers who cannot afford to keep her. Relieved once £6. Voted £6 in 12 instalments.—Widow, aged 41, of M.R.C.S. Eng. who practised in N. Wales. Has two young children. Endeavours to earn a living by selling clothes on commission, but owing to the war the sales have greatly diminished. Relieved three times, £30. Voted £10 in two instalments.—Widow, aged 60, of L.R.C.P. & S. Edin. who practised in London. Present distress caused by death of only son who supported her. Earns a little by needlework. One daughter allows her 5s. per week, otherwise no other support. Relieved twice, £20. Voted £10 in two instalments.—Daughter, aged 56, of L.R.C.P. Lond. who practised at Hammersmith. Unable to work through ill-health. Only income a little from the Guild and occasional gifts of food and clothing. Relieved seven times, £56. Voted £18 in 12 instalments.—Widow, aged 69, of M.R.C.S. Eng. who practised in Ireland and America. Suffers from muscular rheumatism. One son who has not been heard of for a long time. No income and unable to work. Relieved five times, £80. Voted £12 in 12 instalments.—Daughter, aged 68, of M.D. Edin. who practised at Cheltenham. Eyesight very bad, and ill-health prevents her doing any work. Only income £13 10s. per annum, and a little from friends. Relieved once, £12. Voted £12 in 12 instalments.—Widow, aged 68, of M.R.C.S. Eng. who practised at Yelverton. Takes paying guests, but owing to the bad season is in difficulties. Relieved five times, £52. Voted £12 in 12 instalments.—Daughter, aged 58, of L.R.C.P. Lond. and L.S.A. Lond. who practised at Brierley Hill. Health very bad and unable to do any permanent work. Income a R.U.K.B. Assoc. pension of £21 per annum and from friends 10s. per month. Relieved seven times, £41. Voted £12 in 12 instalments.—Daughter, aged 52, of M.R.C.S Eng. who practised in London. Has had several internal operations and obliged to mortgage her small capital to pay for same. Lives with married sister, who gives her a home but unable to keep her. Relieved five times, £54. Voted £10 in two instalments.—Daughter, aged 63 years, of M.R.C.S. Eng. who practised at Northampton. Health very indifferent. Has a small annuity, but not sufficient to live on. Relieved once, £5. Voted £5.—Daughter, aged 47, of M.R.C.S. Eng. who practised in India. Is bedridden and quite helpless. Only income an annuity from the British Home for Incurables. Relieved three times, £36. Voted £12 in 12 instalments.—Widow, aged 43, of M.D. Irel. who practised at Newcastle-on-Tyne. Health indifferent, but endeavours to make a little by taking lodgers. Allowed £25 per annum for education of only child. Relieved four times, £30. Voted £5.—Daughter, aged 68, of M.R.C.S. Eng. who practised at Gillingham. Has very indifferent health and unable to find suitable employment. Recently has been selling papers in the streets at a remuneration only sufficient to pay the rent of a room. Relieved once, £5. Voted £12 in 12 instalments and referred to the Guild.—Widow, aged 56, of L.S.A. Lond. who practised at Limehouse. Endeavours to make a living by letting rooms, but not very successfully. Two daughters, who are in service, can only allow her 5s. per month. Health bad. Relieved nine times, £46. Voted £12 in 12 instalments.—Daughter, aged 66, of M.R.C.S. Eng. who practised at Great Torrington. Has acted as housekeeper and general help, but at present out of employment, as her age is against her. Relieved once, £12. Voted £1 and referred to the Guild for report.

In addition to the above the committee appointed from the grantees six annuitants at £20 each. This brings the total of annuitants up to 142. Contributions may be sent to the honorary treasurer, Dr. S. West, 11, Chandos-street, Cavendish-square, London, W.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a meeting of the College held last week Professor Edward H. Taylor was unanimously elected to the place on the council vacant by the death of Mr. F. T. P. Newell.

ANTHRAX AND ITS NOTIFICATION.—An adjourned inquiry was concluded on Jan. 4th by Dr. F. J. Waldo, at the Southwark coroner's court, into the death of a butcher's manager named Tarrant, aged 46, who died in Guy's Hospital from anthrax. It was stated that Tarrant's employer purchased his meat from a firm whose head slaughterman died from anthrax at Croydon, and about the same time the deceased complained of a pustule on his neck which was diagnosed as anthrax. A clerk of the same wholesale firm and a son of Tarrant's employer, were also suffering from the same disease, but were recovering, and another man had since contracted the disease and a horse had died from it. Dr. T. M. Legge, H.M. Inspector of Factories and Workshops, in the course of his evidence, stated that anthrax was a notifiable disease when occurring in a factory, but a butcher's premises were not technically a factory. He had never heard of anthrax being communicated by frozen rabbits. The coroner read a letter from the High Commissioner for New Zealand informing him that there had not been a case of anthrax in that country for years, and that frozen rabbits had never been known to carry the infection. Dr. Legge further stated that in some districts registrars of deaths reported deaths from anthrax to the chief factory inspector, which was very useful, and in his opinion the disease should be compulsorily notifiable to coroners in fatal cases. Evidence on behalf of the wholesale firm showed that great care was taken in the purchase of cattle, and that since the present cases their premises had been thoroughly disinfected. Dr. R. V. Clarke, medical officer of health of Croydon, said that every possible assistance had been given him by this firm, who had supplied a complete list of all animals they had dealt with and their sources. He agreed that it would be very useful if all deaths from anthrax were reported to the coroner. He had never seen anthrax in frozen meat. The city coroner, in the course of his summing-up, said that he had always advocated the addition of anthrax to the list of infectious diseases compulsorily notifiable to the medical officer of health. The Guy's Hospital authorities always notified fatal cases of anthrax to him. It seemed strange that whereas all cases of anthrax in the human subject were not compulsorily notifiable, all cases in the lower animals were compulsorily notifiable under the stringent regulations of the Contagious Diseases (Animals) Act. The jury returned a verdict of "Death from anthrax," but added that there was not sufficient evidence to show how it was contracted, the verdict amounting thus to one of "Death from misadventure." In a rider they suggested that all doctors attending such cases should be compelled to notify to the medical officer of health, and that all deaths should be compulsorily reported to the coroner. This recommendation will be forwarded by the coroner to the Local Government Board and other authorities.

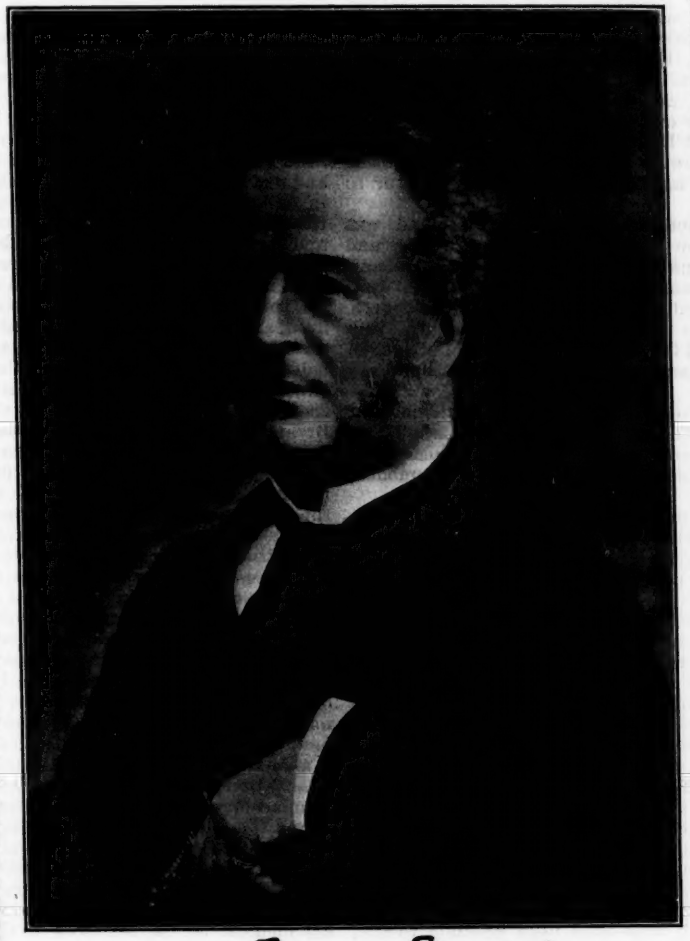
Obituary.

THOMAS BRYANT, F.R.C.S. ENG., HON. M.CH. R.U.I., HON. M.D. DUB., HON. F.R.C.S. IREL.,

CONSULTING SURGEON TO GUY'S HOSPITAL; LATE SURGEON IN ORDINARY TO THE KING.

THE death of Mr. Thomas Bryant, which took place on Dec. 30th at his residence, 21, FitzGeorge-avenue, Kensington, deprives the profession of a prominent figure in Victorian surgery.

Thomas Bryant, who was the eldest son of the late Mr. Thomas Egerton Bryant, M.R.C.S., an intimate friend of Sir Astley Cooper, was born in Kennington on May 26th, 1828, and had therefore reached the age of 86 at the time of his death. He received his education at King's College School, and in 1846 entered Guy's Hospital as a student, remaining connected with it for the whole of his professional life and being one of its consulting surgeons at the time of his death. He qualified as M.R.C.S. in 1849. He took the Fellowship of the Royal College of Surgeons by examination on May 12th, 1853, with Mr. Richard Barwell, and was therefore one of the two oldest surviving Fellows of the College. In 1857 Thomas Bryant was appointed assistant surgeon to Guy's Hospital and in 1859 lecturer on operative surgery. On the full staff of the hospital at that time were Gull, Hilton, and Cock, while Wilks was the junior assistant physician, corresponding to Bryant on the surgical side. He became full surgeon in 1871 and lecturer on surgery in 1875. He relinquished these posts in 1888 and became consulting surgeon, continuing, however, to give lectures on clinical surgery for a while. During his active connexion with Guy's Hospital he was simultaneously carrying on a very large private practice as an operating and consulting surgeon—indeed, during what may be called the immediate pre-Listerian period he was one of the leading surgeons in the metropolis, and fully deserved the position.



Thomas Bryant

Mr. Bryant's connexion with the Royal College of Surgeons of England was an exceedingly long one. He became a member of the Council in 1880, at the same time as Lister, whom he just beat in the voting. While on the Council he filled with efficiency every available appointment. He was a member of the Court of Examiners from 1882 to 1892, as well as a representative of that court on the Board of Examiners in Dental Surgery in 1887. In 1888 he was Hunterian professor of surgery and in 1889 Bradshaw lecturer of the College. In 1890 he was elected President, and in 1891 he became the representaive of the College on the General Medical Council. In 1893 he was Hunterian orator. He was President of the College for three years, but in this position made no particular mark, for his business aptitude was not great. His handsome presence, urbanity, and real kindness of heart were his chief assets in public life. Bryant was for many years—namely, from 1891 to 1904—the representative of the Royal College of Surgeons of England on the General Medical Council, and for part of this time he acted as honorary treasurer. He was a pleasant colleague on the Council, and had a very high standard of professional ethics, but he was treasurer at a difficult period in the finances of the Council, and his designs for meeting the position did not escape criticism. He also occupied the presidential chair of various professional societies, the Medical Society of London in 1872, the Hunterian Society in 1873, the Clinical Society in 1885, and the Royal Medical and Chirurgical Society in 1898–99.

In 1872 he published the first edition of his "Practice of Surgery," which reached a fourth edition in 1884. The book attracted immediate attention from its original features. The illustrations were for the most part original, instead of the old stock illustrations which had for years been reproduced *ad nauseam*; secondly, Bryant introduced the principle of colouring arteries and veins respectively red and blue; and thirdly, he quoted his references to previous authors in place of paraphrasing them with or even without acknowledgment, as was then too commonly the practice. The book was at once recognised as essentially the fruit of experience by a well-practised surgeon, but it was not written upon any plan which enabled it to be kept in the front by new editions as a standard work. It dated from the pre-Listerian era, was an admirable manual, and sold largely, but could not be modernised as surgery progressed. He also published works on "Diseases of the Breast" (1887) on the "Surgical Diseases of Children" (1893), and on "Villous Growths and Common Diseases of the Rectum" (1899), and was a frequent contributor to THE LANCET.

Among the honours that fell to him, he was Sergeant Surgeon to the late Queen Victoria and Surgeon in Ordinary to King Edward VII. Academically he was honoured in 1887 by the Royal University in Ireland with its honorary M.Ch. degree, and in 1892 the University of Dublin gave him its honorary M.D., while the Royal College of Surgeons in Ireland conferred on him its honorary Fellowship.

At the time of his death Mr. Bryant had for some years retired from practice, and it is an open secret that his connexion with certain disastrous financial undertakings left him in very modest circumstances.

Mr. C. H. Golding-Bird writes:—"With the death of Thomas Bryant, a representative surgeon and teacher of his day, a link between past and present surgical practice and a man of noble presence has passed away. It was in the late 'sixties' that I first knew him, when he was assistant surgeon to Guy's Hospital, and to his careful, thorough, and lucid teaching many, like myself, owe the foundation of their surgical knowledge. His out-patient day was always crowded, and that not only by students but often by practitioners, whilst his firm yet kindly manner and his sympathetic treatment of the poor attracted the patients themselves, and his name was a household word amongst the dwellers in South London. Always optimistic, contact with him helped the young student along the difficult paths of surgical practice, and even where his hopeful prognostications were seen not to be fulfilled his pupils seemed instinctively to feel that it was no fault of his; for if it—whatever it was—had been possible to any, Bryant was the man to have done it; if he failed, no one else could have achieved it. He was the man to trust. Method, precision, and clear expression in teaching were the keynotes of his success; he would come, always very punctually, to the hospital armed with several note-books, and almost every patient was therein entered, with the diagnosis and remarks on the case; and it was from these books he largely drew the statistics for which he had a great liking, but on which I certainly cannot but think an exaggerated value was often placed and from which deductions not always safe were drawn.

The year after his appointment as full surgeon to the hospital his text-book of surgery appeared and was at once welcomed as the best and most up-to-date work for the student. Written rather from the author's clinical experience than from reference to that of others, the book possessed an individuality of its own, and inspired a confidence in what it taught.

A general hospital surgeon in the full sense of the word, Bryant had little sympathy with specialists and specialisms; but in his palmy days research had not differentiated the various departments of surgery as it has done in later years. He, however, was considered by some as a specialist in at least two subjects—viz., the surgery of the breast and the abdomen, particularly in colotomy and ovariotomy. In breast surgery he had been preceded by John Birkett, whose practice, which I knew well, undoubtedly influenced his successor, and though both surgeons only operated in the limited way of their period, the immediate results obtained by Bryant were clinically very remarkable. Strict cleanliness, though only that of soap and water and clean towels, together with rapidity in operating and the important recognition of the harm resulting from the retention of blood and serum in the wound, were his main elements of success. His dressing of a breast case, after the suturing of the wound, consisted in the application for some minutes of firm pressure to express all fluid, and then of a towel, folded as it came from the laundry, over each flap—with generally Friar's balsam on the wound itself—followed by very firm bandaging to prevent the possibility of any re-accumulation of blood. I can vouch for it that Bryant had rarely any complication follow which was directly due to the operation or to the immediate after-treatment, and primary union was not infrequently secured. With the same methods the same success followed his amputations of the breast—a common enough operation at that time. Bryant was most anxious to avoid the use of buried ligatures, which for some time consisted only of silk dipped in boiling wax and carbolic acid, so when torsion was found feasible he became its pioneer at his hospital; and the forceps for the purpose used for many years, and which preceded Spencer Wells' forceps, were, I believe, of his own pattern—at any rate, they always bore his name. He was keen to try anything new, and before either adopting it or abandoning it gave it an exhaustive—and to his dressers instructive—trial. Hence, amongst other reasons, the great demand for a dressership in his wards. Bryant was a bold though careful and neat operator. He used his knife without hesitancy, and anything but a clean cut was abhorrent to him. The medical operations, if I may so style them, were few in his day; but he never hesitated to act at the request of his medical colleagues, even if there were no precedent for it, if he honestly thought there was a reasonable chance of success; and he has told me that he was the first to explore a 'perityphlitic' swelling and found the 'date-stone,' though he never suspected, as no one then did, any connexion with the appendix. As a colotomist he had a wide reputation; and I know, since I often assisted him in private, that many cases from abroad sought his aid. A summons once took him to Constantinople to one of these cases, an occurrence of which he was justly proud. These were, of course, the days of the lumbar operation, when if the peritoneum were by chance injured a fatal peritonitis was

practically certain to ensue; yet he never shirked responsibility, though I know with what extreme anxiety he always approached these cases and how keenly he felt failure when it occurred.

Bryant's position in regard to Listerism was peculiar; he never could bring himself to adopt it, and he was one of the two leading surgeons who spoke for the 'opposition' at the conclave held—early, I think, in the 'seventies'—at St. Thomas's Hospital to consider the merits of this method as then evolved. He spoke against it in an unqualified manner; but to this, I think, he was prompted by the success undoubtedly enjoyed by the general methods of cleanliness that he had so long practised and to which he thought little could be added by way of improvement. And at that time it must be remembered that carbolic acid was rather a two-edged tool to play with, for it was far from pure, causing intense irritation, not only to the operator, but to the patient, and that to a degree unsuspected by those who now have only to deal with the absolutely pure chemical. He necessarily also never made use of the 'spray,' though he could not in the nature of things withhold from being gradually influenced by what was developing around him, so the various antiseptic Listerian dressings were by degrees adopted, at least in his hospital practice. Having never adopted the antiseptic methods in their entirety, his immediate results were presently not so favourable as those of his colleagues, such as Howse or Davies-Colley, who were antiseptic to their finger ends. Later on he almost entirely dropped carbolic acid, employing peroxide of hydrogen and iodine water (i.e., water with a little tinct. iodi added) both in his operations and for the cleansing of foul cavities. This is the more interesting to note now, since these two drugs have sprung into notoriety; but my own experience of them in Bryant's practice, which I not only witnessed but which at times I was asked to take charge of, failed to inspire me with confidence in their efficacy, whatever value an immediate compress of tinct. iodi on a recent wound may have, for in this way I never knew him to employ the drug.

As an ovariotomist, too, Bryant had a great reputation, and he undoubtedly scored many a success in his earlier operations by a scrupulous attention to general details and to cleanliness, as well as to his habit of refraining from all meddlesome handling of organs. His success here was markedly increased when he began to employ the extra-abdominal method of treating the pedicle by clamping—a practice that, I believe, he was the first to employ in Guy's Hospital, and which was followed for many years. There can be no doubt that his scope of work was largely limited in his later years by his never having fully adopted antiseptic methods—for aseptic methods do not apply to his time—and from conversations I have had with him I am convinced he was far too conscientious a man to undertake some of the more modern operations, from a feeling that he was handicapped by not being able to give his patient the full benefit of recent scientific knowledge. If Bryant prided himself more on one thing than another it was in being a conservative surgeon; and he constantly instilled into his pupils the doctrine that it was wrong, if not immoral, to remove an atom more of the human body than the actual disease warranted. Doubtless this, broadly speaking, was a good principle to inculcate, but carried too far, as it sometimes was, especially in amputations, it led in his practice to some awkward and inconvenient results. His teaching, however, in regard to the relationship between surgeon and patient had always an undercurrent of high ideal and straightforwardness. Bryant always thought more of his patient than of himself, and I never knew him to be influenced by the desire to improve his statistics—much as he liked these figures—to the extent of either unnecessarily operating or in any way adding to his patient's risk or discomfort.

A handsome man, of commanding presence, with a personality that impressed itself on others, genial, kindly, and always ready to lend an ear to any that sought his advice, Bryant was the friend of all who knew him, whether student, colleague, or patient. The student felt that in him he had a friend to whom he could go for advice at all times, and never fail to get his sympathy and help. To his dressers' mistakes he was lenient, and whilst he never overlooked anything nor hesitated to correct, he at the same time explained and instructed so as to avoid a repetition of a similar mischance. As a colleague he was valued by all, and though "once upon a time" there arose a serious difference between himself and a colleague that even threatened the peace of the hospital, he met his quondam friend in the open court of the operating theatre at the instance of their other colleagues, and both men publicly shook hands and thus closed the incident for ever. Beyond this nothing ever happened to disturb the harmony with which Bryant performed his public duties at Guy's Hospital; and those who knew him personally will always cherish the memory of him as of a true friend, a courteous gentleman, and if not exactly a pioneer, at any rate a splendid example of the British surgeon.

Dr. Frederick Taylor writes:—"It would be presumptuous in me to say much about Mr. Bryant's special qualifications as a surgeon, but I may be allowed to give my impressions of him as a teacher in the school of Guy's Hospital and as a colleague on the medical staff. In the middle 'sixties' the surgical teachers most followed by the students at Guy's Hospital were among the surgeons Mr. John Hilton, and among the assistant surgeons Mr. Thomas Bryant. Mr. Bryant was then approaching 40 years of age, was tall, upright, handsome, with an easy confident carriage, a cheerful look, and a clear pleasant voice—altogether a very taking personality, with every appearance of knowing exactly what he was about, and without anything that could be fairly regarded as undue self-satisfaction. He attracted the student by his friendly manner of dealing with his dressers and clerks, and I may also say with his hospital patients. Happily these surface-markings, so to say, were not belied by anything that he gave us as a surgeon and teacher of surgery. In the latter capacity he was highly successful. Whether in the out-patient room, at the bedside, or in the lecture theatre he always had a large class, and with his clear, incisive speech and the clever arrangement of his facts and arguments he kept the attention of his audience to the last moment of the allotted time. At the bedside and in the out-patient room he interested himself in the progress of every student, even the most junior, and developed to the full the excellent system of teaching by question and answer.

As a surgeon he was keen and courageous to a degree. He was one of the early successful operators for ovariotomy, and he had the courage to remove

the spleen in two cases, but only two, of splenic leukæmia at a time when leukæmia was rarely recognised until the spleen had become enormous, and when the supreme difficulty of checking hæmorrhage in a highly leukæmic patient had not been fully recognised. The substitution of torsion for ligature of arteries was another innovation about that time, which he adopted with great ardour and employed successfully, I believe that in his later years he was regarded as being somewhat behindhand in the matter of antiseptic and aseptic surgery; but it could not have been from any disagreement with the principle of such treatment, for I well remember that he tried, enthusiastically and hopefully, Lister's treatment in its first phase—namely, the thorough dressing of wounds with carbolic oil.

Mr. Bryant was a good colleague. He took his fair share of the administrative work of the school and hospital, was punctual and exact in his attendance, and always courteous, considerate, and helpful in committee or council. He wrote attractive and valuable articles in the *Guy's Hospital Reports*, and frequently contributed cases from his wards to the 'Mirror' of THE LANCET. I will leave to others to appraise the merits of his book on the 'Practice of Surgery,' about which he took an immense amount of trouble and which at its first appearance was unique amongst British works in the profuseness of its illustrations, and had a pronounced success."

Sir Dyce Duckworth writes:—"I was brought into close relation with Mr. Bryant for some years on the General Medical Council, and I have none but kindly remembrances of him. He took his duties seriously, and was always a pleasant colleague who laboured diligently in the Council, and in his study, at its committee work. We represented our respective Royal Colleges and the English Conjoint Examining Board. I did not always see eye to eye with him on some matters in the Council when it became necessary to withstand opposition, but such little differences never ruffled his kindly nature or cooled our friendship for a moment. I can bear no worthy testimony as to his surgical skill and teaching, but I always regarded these as expressive of the recognised soundness of the Guy's school of surgery of his day. He was tenacious of all that he felt sure of, and his convictions were certainly founded on a large practical experience. I am sure that he was esteemed by his colleagues, his pupils, and his patients as a tender-hearted and sympathetic man, and one cannot doubt that his record as a surgeon will surely add to the reputation of his school.—*Exstinctus amabitur idem.*"

A CENTENARIAN.—The death is announced at Newry of Miss Ellen Byrne, who is said to have been the oldest woman in Ireland, having reached the reputed age of 115 years.

BRISTOL INFECTIOUS HOSPITAL.—At the last meeting of the Bristol city council it was decided to increase the isolation hospital accommodation by extensions at the Nover's Hill Hospital. The scheme is estimated to cost about £7700, and will provide for 24 additional beds and increased accommodation for the staff.

DONATIONS AND BEQUESTS.—The late Mr. J. H. Burley, of Leamington, has bequeathed £5000 to the Leicester Infirmary for a "Burley Ward" or for beds to be called "Burley Beds," and £2000 each to the Leicester Institution for the Blind, the Children's Hospital, Leicester, the Home for Incurables, Leamington, and the Cancer Hospital, Fulham.

THE BELGIAN DOCTORS' AND PHARMACISTS' RELIEF FUND.

DURING the week terminating on Tuesday, Jan. 5th, the subscriptions announced below have come in, and the correspondence which has been received by the secretaries shows that interest in the movement is spreading. The objects of the Fund, which aims at alleviating the misfortunes of Belgian doctors and pharmacists, both those remaining in Belgium and those who are refugees with us, have been seen to concern closely the two professions in this country, and the response to appeals for the Fund has been considerable. A number of representative men have joined the General Committee.

An appeal is now being distributed by the Executive Committee of the Fund, which it is hoped will be followed by more general support.

The subscriptions which have been received up to Tuesday evening last by the honorary treasurer, Dr. Des Vœux, in addition to £2505 previously announced, and not including the subscriptions received in Dublin, are as follows:—

	£	s.	d.
Dr. E. Kaye-Smith ...	3	3	0
Dr. C. P. Handson... ...	1	1	0
Dr. E. J. Wood	1	1	0
"The Barrhead Medical Men" (per Dr. R. Corbett)...	5	0	0
Dr. May Thorne	2	2	0
Surgeon H. W. Scott, R.N.	2	2	0
Dr. R. O. Moon	5	5	0
Dr. Pelham C. Maitland	1	0	0
Dr. Dora B. L. Bunting	1	0	0
Dr. Guy B. Courtney ...	1	1	0
Dr. H. Cooper Pattin ...	1	1	0
Mr. Kenneth Scott ...	2	2	0
Dr. E. T. Larkham ...	1	1	0
Dr. Bruce C. Kelly ...	2	0	0
Messrs. H. Mitchell and Son	0	10	6
Dr. James Green	2	2	0
Mr. George Waugh ...	5	5	0
Dr. R. Wilde	0	10	0
Surg.-General O'Dwyer, A.M.S.	1	1	0
Dr. T. A. Chapman ...	2	2	0
Mr. W. H. Vickery ...	1	1	0
Dr. Rossiter	1	1	0
Mr. Frederic Durham ...	2	2	0
Dr. South	1	1	0
Mr. Charles Spurrell ...	2	2	0
Dr. D. H. Forty	1	1	0
Dr. H. P. Fairlie	5	0	0
Dr. Douglas D. Malpas...	2	2	0
Dr. H. L. Ormerod... ...	3	3	0
Dr. Eliza L. Walker Dunbar	2	2	0
Dr. T. Hammond Williams...	2	2	0
Midland Railway Surgeons' Association (per Mr. F. W. J. Coaker, Hon. Treas.)...	3	3	0
Dr. F. St. John Bullen...	5	5	0
Mr. J. P. Ellerington ("La Pharmacie Française") (third donation)	5	0	0
Miss Edith M. Ironie ...	2	0	0
Mr. H. J. Kluge	3	3	0
Consett Division, B.M.A. (per Dr. J. Charles, Hon. Sec.)—			
Dr. Thos. Grainger...	3	3	0
Dr. William Bratten	1	1	0
Dr. A. D. M. Macintyre	1	1	0
Dr. J. Murray	1	1	0
Dr. W. C. Fraser ...	2	2	0
Dr. W. M. Morison...	1	1	0
Dr. Alex. Cook ...	1	1	0
Dr. R. E. Ingram-Johnson...	1	1	0
Dr. E. G. D. Benson	1	1	0
Dr. D. A. Dewar ...	1	1	0
Dr. J. Charles... ...	1	1	0
Dr. H. Finzel	1	1	0
Dr. Semple	1	1	0
Dr. Reginald A. Yeld ...	0	10	0
Canterbury and Faversham Division, B.M.A. (second donation) (per Dr. Neil Robson, Hon. Sec.):—			
Dr. John Greasley...	1	1	0
Dr. S. R. Alexander	1	1	0
Dr. W. M. Scott ...	1	1	0
Dr. F. W. Penfold...	1	1	0
Dr. John Watson	1	1	0
Dr. A. E. Barclay	10	10	0
Shropshire and Mid-Wales Branch, B.M.A., second donation (per Dr. A. G. Mackenzie, Hon. Sec.)—			
Dr. H. G. P. Le Fanu	1	1	0
Dr. J. H. Clark ...	1	1	0
Dr. E. A. Elkington	1	1	0
Mr. Prosper H. Marsden	1	1	
Messrs. T. and H. Smith, Limited	25	0	0
Employees of Messrs. Reynolds and Branson, Limited (per H. S. Sykes, Esq.)...	5	5	0
Lieutenant-Colonel Walsh, I.M.S. (by sale of gold medal)	10	10	0

Subscriptions to the Fund should be made payable to the Belgian Doctors' and Pharmacists' Relief Fund, crossed Lloyds Bank, Limited, and sent to Dr. H. A. Des Vœux, 14, Buckingham-gate, London, S.W.

THE APPEAL FOR SURGICAL INSTRUMENTS.

The Master of the Society of Apothecaries begs to acknowledge with thanks the receipt of surgical instruments, &c., kindly contributed by the following gentlemen since the publication of the last list:—

Dr. W. F. Gibb, Paisley; Anonymous; Dr. Wakefield, Northwood, Middlesex; Dr. Pickett, Croydon.

THE WAR.

THE CASUALTY LIST.

When H.M.S. *Formidable* was sunk in the English Channel in the early hours of New Year's Day her three medical officers were on board, and the Admiralty assumes that they have lost their lives. Their names are: Fleet-Surgeon Godfrey Taylor, R.N.; Surgeon William Mearns, R.N.; and Surgeon Septimus Hibbert, R.N.V.R.

THE AMBULANCE CONSTRUCTION COMMISSION.

This is the first great war in which field motor ambulances have been extensively used. It was inevitable that many defects should be found in existing types, and in various quarters experts began to ask whether something could not be done to standardise the patterns and to improve the type. At the instance of Mr. Henry S. Wellcome, founder of the Wellcome Bureau of Scientific Research, a commission has been formed, and the names of members show that the matter is regarded as of high importance by those most intimately connected with the welfare of the wounded soldier.

Sir Frederick Treves will act as chairman. The Admiralty is represented by the Director-General of the Medical Department, R.N.. Surgeon-General Sir Arthur May, while the Quartermaster-General to the Forces, Major-General Sir John Cowans, and the Acting Director-General, Army Medical Service, Surgeon-General Sir Alfred Keogh, represent the War Office. The British Red Cross Society is represented by Sir Frederick Treves, and the St. John Ambulance Association by Sir Claude Macdonald and Sir John Furley. The remaining members are Lord Montagu of Beaulieu, Professor W. E. Dalby, F.R.S., Mr. John Robertson, and Dr. Andrew Balfour (honorary secretary and treasurer). This commission will act as a judging committee for the award of prizes of the value of £2000 provided by the Wellcome Bureau of Scientific Research. These prizes are offered for the best designs of an ambulance body which shall fit a standard pattern motor chassis for field motor ambulances. The last day for the receipt of competing designs is June 30th, 1915. It is hoped that the competition will bring in a number of ingenious designs from which the ideal field ambulance body will be evolved.

The reason why the competition is restricted to designs for a body and not for the complete ambulance, including a chassis, is that a chassis takes much longer to build than a body, and that, when war breaks out, it is impossible to get at short notice anything like a sufficient number of any one type of chassis. On the other hand, a standardised body to fit any chassis of approved dimensions can be constructed in numbers at comparatively short notice. Moreover, a perfected body is badly wanted to ensure complete comfort for the wounded.

It is hoped that the information obtained by the competition, and in other ways, will be published in some permanent form, available for future reference. Probably, in addition to one design of special excellence, there will be submitted various ingenious suggestions which may be incorporated in the pattern design approved by the commission. For these a portion of the prize money has been set apart. The first prize is of £1000, the second of £500, and the third of £300. All details of conditions may be obtained from the secretary, the Ambulance Construction Commission, 10, Henrietta-street, Cavendish-square, London, W. The competition is open to citizens of all nations, and designs may be submitted up to June 30th, 1915.

FRENCH STATISTICS OF THE WOUNDED.

The French Army Medical Service recently published figures showing the percentages of French soldiers wounded in the present war who are, or are likely to be, fit to return to active service. The approximate percentages up to Dec. 1st last were given as follows:—

	Per cent.
Wounded but now returned to the front ...	54·50
Wounded and on convalescent leave	24·50
Wounded and under treatment in hospital...	17·40
Discharged as unfit for further service ...	1·46
Died from wounds	3·40

It will be noted that these add up to more than 100. A former member of the Cabinet has written to us suggesting that corresponding figures, showing the mortality from wounds and the percentages of complete and partial recoveries in the British Expeditionary Force, would be of profound interest to medical men and military students. We hope the Army Medical Department may be willing to furnish such returns.

THE BRITISH RED CROSS SOCIETY.—In its summary of work accomplished during the week ending Jan. 2nd the British Red Cross Society states that the number of auxiliary home hospitals accepted by the War Office to date was 662, containing 18,418 beds, including 1124 accepted during the past fortnight. The following additional ambulance cars were despatched: 8 ambulances, 1 touring car, 1 soup kitchen, and 1 motor cycle to Dunkirk; 2 ambulances and 1 touring car to Boulogne; 1 ambulance to Southampton; and 4 ambulances to Bishop's Stortford. Five medical men have been engaged for service in Serbia and two for Montenegro, and are ready to leave when required. During the past fortnight the Red Cross hospital at Netley has been very full, and a number of entertainments were held at Christmastide. The contractors have begun work upon the "Irish Hospital." Between Dec. 29th and Jan. 2nd 712 cases from the stores department were supplied to 98 hospitals—67 English hospitals and 31 foreign hospitals—and a large number of garments were received and distributed. A list is received daily by the society from Boulogne containing the names of officers reported missing, and reports from brother officers or soldiers stating what they know about these. When the reports are considered reliable they are forwarded to the relatives, and copies are also sent to the War Office. Every wounded man journeying to England is handed a postcard on the boat, whereon he gives the name of the hospital to which he is going, and this enables his relations to find him at the earliest opportunity. A great number of daily callers are received inquiring for missing officers, and every endeavour is made to trace these through the Paris or Boulogne offices. Daily correspondence is maintained with Geneva, the Prisoners of War Bureau, and the Allies Relief Committee.

AUSTRALIAN MEDICINE AND THE WAR.—Our Melbourne correspondent writes, under date of Nov. 23rd:—"The departure of the first Australian contingent was accomplished without serious accident. The health of the men had been good while at the training camp. In a force of about 8000 there were some 60 cases of measles, this disease being prevalent then. These were treated at the Infectious Diseases Hospital, Fairfield. Several deaths occurred in the Melbourne Hospital from pneumonia among soldiers transferred from the camp. The Australian hospital unit is about to leave next week. It will occupy a ship under Red Cross conditions for the voyage and will require no convoy. A staff of 780 people will be on board, which will be subsequently divided among the different hospitals to be established. Particulars have already been given as to these.[1] A further contingent of men is now in training.

[1] THE LANCET, Oct 24th (p. 1025) and Dec. 5th (p. 1334), 1914.

The Melbourne University held a special final examination for any students who were anxious to volunteer for service and whose period of work was satisfactory. No concession was made as to standard of pass work. Four candidates presented themselves and all were passed. Several very well known members of the Victoria profession are included in the hospital unit about to leave. They are Dr. Henry Maudsley, Dr. J. W. Springthorpe, Dr. G. A. Syme, Dr. T. P. Dunhill, and Dr. J. W. Barrett. On Nov. 21st the departing Victorian medical men were entertained by the members of the Victoria Branch of the British Medical Association at a farewell dinner. Complimentary speeches were made, and Dr. Springthorpe stated that on the best authority he was able to say that Australia had contributed more money to the Red Cross Association in proportion to population than any other community. The Australian Medical Federal Council opened a subscription list for the supply and maintenance of motor ambulance facilities for the Australian hospital unit. Already over £700 has been subscribed by medical practitioners, although the fund is only a fortnight old."

CARE OF THE WOUNDED IN EDINBURGH.—Our correspondent writes: "100 wounded and disabled soldiers drawn almost entirely from Scottish regiments arrived in Edinburgh from Southampton on Dec. 31st. The majority of them had come direct from the firing line, and many still had the mud of the trenches on their coats, kilts, and puttees. They complained of the weather and of the condition of the trenches, but were enthusiastic about the way in which they were being treated as regards clothes, food, comforts, reliefs, &c. Of the 100 men about half were wounded, and the remainder were suffering from frost-bite, rheumatics, or pneumonia, testifying to the rigorous conditions under which the war operations are being conducted. Several members of the 8th Royal Scots (T.F.) were among the number. The 100 men were distributed as follows: Craigleith Military Hospital, 50; Dalmeny House, 35; and the Deaconess Hospital, 15. For the purpose of stimulating recruiting for all the battalions of the Royal Scots regiment, and for enrolling the names of men eligible for a 'Bantam battalion,' for submission to the War Office after the Royal Scots regiment is up to establishment and organisation, has been formed ,with Lord Rosebery as prime mover. Rest-rooms for sailors and soldiers have been opened at No. 9, Croall-place, Leith-walk, under the auspices of the Edinburgh Branch of the British Women's Temperance Association, and are provided with comfortable club-rooms where leave time may be spent."

THE TREATMENT OF CHOLERA.—Dr. A. G. Newell, of Assam, has published[1] particulars of four cases of Asiatic cholera at Lahore treated with tincture of iodine internally. Three of the cases recovered, two being natives and one a European (female); these were adults. The fourth case, an infant of 18 months, died. The adult cases were severe ones, and were proved bacteriologically to be true cholera. The dose administered was one minim of tincture of iodine in water every hour or half hour until decided amelioration of the symptoms, and thereafter at longer intervals until recovery. Dr. Newell found that the germicidal action on cholera vibrios was distinct, even in a 1 per cent. solution of tincture of iodine, about equal to 1 in 4000 of iodine, after 24 hours, and in a 10 per cent. solution after 10 minutes. This shows the theoretical efficacy of iodine and that the treatment is rational. Iodine tincture allays vomiting and acts as a disinfectant. It is of course impossible to draw any conclusion from four cases, and as the outbreak was coming to an end the type of case would naturally tend to become milder and more amenable to treatment.

VACANCIES FOR MEDICAL OFFICERS.—We are asked by the Assistant Director of Medical Service of the 1st London Division, Territorial Force, to state that there are vacancies for several medical officers in the field ambulances of the 1st London Division, T.F. These units are now training at their war stations, and the rank and file are of exceptionally good quality. Officers must be duly qualified and registered medical men. Applications should be made by letter or in person to Colonel J. Harper, A.D.M.S., 1st London Division, T.F., Headquarters, Lea, Crowborough, Sussex, and will receive an immediate reply. Captain C. G. Kay Sharp asks us to state that his unit—the Eastern Mounted Brigade Field Ambulance (Reserve) R.A.M.C. (T.F.), stationed at Luton, Beds.—requires three medical officers to bring it up to the full war establishment. Applications should be made to the officer commanding the unit, at Luton. There are still a few vacancies for officers in the 2nd East Anglian Field Ambulance Reserve unit. Pay and allowances will be as in the regular Royal Army Medical Corps, and immediate application should be made to Lieutenant-Colonel Blake Masson, 148, Broadway, Peterborough.

THE UNION JACK CONCERT PARTY.—"Will you help the Union Jack Concerts?" is the question which Miss Helen Mott (violoncellist) and Miss Florence Castelle, writing from Dr. and Mrs. F. W. Mott's house, 25, Nottingham-place, London, W., put to our readers, and through them to the public, supplying excellent reasons why the answer should be in the affirmative. The Union Jack Concert Party provides a weekly entertainment to wounded soldiers and sailors in military and other hospitals, and also assists at least two or three different necessitous artists at each concert, by giving them a small fee for their services. Concerts have already been given at the 4th London General Base Hospital, Denmark Hill; St. George's Hospital; 1st London General Base Hospital, Camberwell; St. Bartholomew's Hospital; 2nd London General Base Hospital, Chelsea (Christmas Eve); University College Hospital, and Queen Alexandra Hospital, Millbank (New Year's Day), at which the following well-known artists, amongst others, very generously came and gave their services: Miss Ellaline Terriss, Mr. Ben Davies, Mr. Lewis Sydney, Mr. Nelson Jackson, Miss Ruby Helder, Mr. Harold Montague, Mr. Ernest Shand, Miss Cicely Courtneidge, Mr. Harry Tate, Miss Wish Wynne, Mr. Albert Whelan, Miss Violet Loraine, Mr. Harrison Hill, Mr. Jock McKay, Miss Margaret Balfour, and Mr. Jack Pleasants. During the next few weeks the Union Jack Concert Party will be going to: the Dreadnought Hospital, Greenwich; 3rd London General Base Hospital, Wandsworth; Royal Free Hospital; Queen Alexandra Hospital; and Great Northern Hospital. Anyone who could see the keen apppreciation and enjoyment of the "Tommies" during these little perfomances would, we are sure, gladly support the work. All contributions will be gratefully acknowledged by Miss Helen Mott and Miss Florence Castelle (25, Nottingham-place, Loudon, W.), who are acting as honorary secretaries as well as giving their artistic aid.

THE TREATMENT OF SO-CALLED "FROSTBITE."—Dr. J. Porter Parkinson, senior physician to the Queen's Hospital for Children and to the London Temperance Hospital, has sent us the following brief note:—"During the past few weeks large numbers of soldiers have been invalided from the front suffering from a painful affection of the feet due to prolonged standing in the trenches. Several of them have told me that after having been 24 or 48 hours in the fighting line they were removed to rear trenches where they took off their boots and socks and warmed their feet before a fire. The feet became numbed and exceedingly painful, the pain extending up the portion of the leg covered by the boot and above the ankle. On admission to hospital there is little to see as a rule, the foot may appear slightly congested, with prominent subcutaneous veins. But at night, when the pain is greatest, some slight swelling and blueness of the feet is visible. Though feeling numb, there is no anæsthesia to touch, prick, heat, or cold. In addition there is often a superficial gangrene of the skin at the extremity of the big toe or one of the other phalanges. The condition resembles erythromelalgia, and is no doubt due to prolonged damp and cold acting on the vasomotor and sensory nerves of the feet.

I would suggest that as soon as possible after the soldier is relieved from the trenches the feet be thoroughly rubbed to restore circulation and not be heated artificially before a fire; and such orders might be given by the commanding officer, who could point out the danger of omitting it. As regards treatment of the cases, elevation of the feet by a pillow under the lower part of the legs is a great comfort, while I have had real success from the administration of antipyrin grs. x. with aspirin grs. xv. thrice daily. The result is that the pains in the feet are usually quite gone in 48 hours."

[1] The Treatment of Cholera, a Cure, by A. G. Newell, M.D. Lahore: Civil and Military Press. 1914. Price Rs. 1.8.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ALEXANDER, W. H. M., M.B., C.M. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Crowle District of the county of Lincoln.

BUSHNELL, F. G., M.D., D.P.H., has been transferred as Tuberculosis Officer and Deputy Medical Officer of Health to the County Borough of Plymouth.

ELLIS, L. ERASMUS, M.D. Brux., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant Physician to the Johannesburg General Hospital, Johannesburg, South Africa.

GRANTHAM, H., M.B., B.S., has been appointed House Surgeon at the Swansea Hospital.

NIMBKAR, V. D., L.R.C.P. & S. Edin., has been appointed Resident Ophthalmic Officer at the General Infirmary, Leeds.

ROBINSON, GEOFFREY S., B.M., B.Ch. Oxon., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon at the Royal Infirmary, Sunderland.

SPENCE, R. J., M.B., B.Ch. R.U.I., has been appointed Medical Officer for Stewartstown Dispensary District and Medical Officer of Health of Stewartstown, county Tyrone.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASHTON-UNDER-LYNE UNION WORKHOUSE.—Resident Assistant Medical Officer. Salary £150 per annum, with rations, laundry, and residence.

AYLESBURY, ROYAL BUCKINGHAMSHIRE HOSPITAL.—House Surgeon, unmarried. Salary £150 per annum, with board, washing, and lodging.

BARNSLEY, BECKETT HOSPITAL AND DISPENSARY.—Second House Surgeon, unmarried. Salary £120 per annum, with apartments, board, and laundry.

BARNSTAPLE, NORTH DEVON INFIRMARY.—Female House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £150 per annum, with residence, board, and laundry.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House Surgeon. Salary £100 per annum, with board and laundry.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church-street.—Senior and Junior House Surgeons. Salaries £110 and £100 per annum respectively, with residence and board, &c.

BIRMINGHAM CITY MENTAL HOSPITAL, Rubery-hill.—Female Junior Assistant Medical Officer. Salary £200 per annum, with apartments, board, laundry, &c.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer, unmarried. Salary £240 per annum, with apartments, fire, lights, and attendance.

BIRMINGHAM UNION.—DUDLEY-ROAD INFIRMARY: Second Assistant Medical Officer. Salary at rate of £210 per annum. Third Assistant Medical Officer. Salary at rate of £170 per annum. Fourth Assistant Medical Officer. Salary at rate of £160 per annum. SELLY OAK INFIRMARY: Assistant Medical Officer. Salary at rate of £180 per annum. All with apartments, rations, laundry, and attendance.

BRADFORD ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

BRADFORD, ST. LUKE'S HOSPITAL AND UNION HOUSE.—Assistant Resident Medical Officer, unmarried. Salary £150 per annum, with rations, apartments, and washing.

BRENTWOOD ASYLUM, Brentwood, Essex.—Locum Tenens Assistant Medical Officer. Salary £5 5s. per week, with board, attendance, lodging, and washing.

BRIDGWATER HOSPITAL.—House Surgeon, unmarried. Salary at rate of £125 per annum, with board, lodging, and washing.

BRISTOL, COSSHAM MEMORIAL HOSPITAL, Kingswood.—House Surgeon. Salary £120 per annum, with board, lodging, and washing.

BRISTOL EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and laundry.

BRISTOL GENERAL HOSPITAL.—Resident Obstetric Officer for six months. Salary at rate of £120 per annum, with board, residence, &c.

BRISTOL, NORDRACH-UPON-MENDIP SANATORIUM, Blagdon.—Assistant Medical Officer. Salary £200 per annum, with board and residence.

BURTON-UPON-TRENT COUNTY BOROUGH.—Assistant Medical Officer of Health. Salary £300 per annum.

BURY AND DISTRICT JOINT HOSPITAL BOARD.—Assistant to Medical Superintendent. Salary £200 per annum, with board, washing, and lodging.

BURY INFIRMARY.—Junior House Surgeon. Salary £150 per annum, with board, residence, and washing

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—Senior House Surgeon and Junior House Surgeon, unmarried. Salary £100 and £90 per annum respectively, with board, lodging, and washing.

CANTERBURY, KENT COUNTY ASYLUM, Chartham.—Third Junior Assistant Medical Officer. Salary £250 per annum, with quarters, board, washing, &c.

CARDIFF, KING EDWARD VII.'s HOSPITAL.—Female House Surgeon for Ophthalmic and Ear and Throat Departments. Salary £140 per annum, with board, laundry, and residence.

CARDIFF, KING EDWARD VII. WELSH NATIONAL MEMORIAL ASSOCIATION.—Assistant Resident Medical Officer. Salary £250 per annum and maintenance.

CHICHESTER, WEST SUSSEX COUNTY MENTAL HOSPITAL.—Second Assistant Medical Officer. Salary £250 per annum, with apartments, board, laundry, and attendance.

CITY OF LONDON UNION INSTITUTION AND INFIRMARY, 42, Clifden-road, Lower Clapton, N.E.—Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, rations, and washing.

CITY OF WESTMINSTER UNION INFIRMARY, Fulham-road, S.W.—Second Assistant Medical Officer and Third Assistant Medical Officer. Salaries £160 and £140 per annum respectively, with board, residence, and washing.

CROYDON GENERAL HOSPITAL.—Senior House Surgeon. Salary £105 per annum, with residence, board, and laundry.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon for six months. Salary £100 per annum, with board, residence, and washing.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—Resident House Surgeon. Salary £130 per annum.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREAT YARMOUTH HOSPITAL.—House Surgeon, unmarried. Salary £200 per annum, with board, lodging, and washing.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—House Surgeon. Salary £150 per annum, with board, residence, and laundry.

HIGHLANDS AND ISLANDS (MEDICAL SERVICE) BOARD, North Harris.—Medical Practitioner. Salary £300 per annum, with house.

HULL CITY ASYLUM.—Junior Assistant Medical Officer. Salary £200 per annum, with board, lodging, and washing.

KENT COUNTY COUNCIL.—Tuberculosis Officer. Salary at rate of £500 per annum.

LANCASTER ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £120 per annum, with residence, board, attendance, and washing.

LEEDS PUBLIC DISPENSARY.—Female Resident Medical Officer. Salary £130 per annum, with board, residence, and laundry.

LEICESTERSHIRE EDUCATION COMMITTEE.—Temporary Assistant School Medical Officer. Salary at rate of £300 per annum.

LERWICK PARISH COUNCIL AND SHETLAND COMBINATION POORHOUSE COMMITTEE.—Medical Officer. Salary £78 per annum.

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL.—House Physician and House Surgeon for six months. Salary at rate of £60 per annum each, with board, residence, and laundry.

LIVERPOOL STANLEY HOSPITAL.—House Surgeon. Salary £80 per annum, with board, residence, and laundry.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—House Surgeon. Salary £50 per annum.

MANCHESTER CORPORATION.—Two Assistant Tuberculosis Medical Officers. Salary £350 each per annum.

MANCHESTER, COUNTY ASYLUM, Prestwich.—Assistant Medical Officer, unmarried. Salary £250 per annum, with board, apartments, attendance, and washing. Also Locum Tenens, unmarried. Salary £6 6s. per week.

MANCHESTER, HULME DISPENSARY, Dale-street, Stretford-road.—House Surgeon. Salary £180 per annum, with apartments, attendance, coal, and gas.

MANCHESTER ROYAL EYE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with residence, board, and washing.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Resident Surgical Officer. Salary £90 per annum, with board and residence. Also House Surgeon for three or six months. Salary at rate of £70 per annum, with board and residence.

MANCHESTER, VICTORIA MEMORIAL JEWISH HOSPITAL, Cheetham.—Female Resident Medical Officer for six months. Salary at rate of £100 per annum, with rooms, board, and laundry.

METROPOLITAN ASYLUMS BOARD INFECTIOUS HOSPITALS AND SANATORIA.—Assistant Medical Officers, unmarried. Salary £250 per annum, with residential allowances.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Junior House Surgeon for six months. Salary £85 per annum, with board, residence, and laundry.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Surgeon Laryngologist.

NEWPORT (MON.), ROYAL GWENT HOSPITAL.—Resident Medical Officer. Salary for first six months at rate of £100 per annum, second six months £125, and third six months £150, with board, residence, and laundry.

NOTTINGHAM GENERAL HOSPITAL.—Senior House Physician. Salary £120 per annum, with board, residence, and laundry.

PRESTON ROYAL INFIRMARY.—Assistant Resident Medical and Surgical Officer. Salary £120 per annum, with board, residence, and laundry.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Surgeon for six months. Salary £80 per annum, with board, residence, and washing. Also Assistant Physician.

ROCHESTER, ST. BARTHOLOMEW'S HOSPITAL.—Assistant House Surgeon, unmarried, for six months.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL, 234, Great Portland-street, W.—Resident House Surgeon. Salary £100 per annum, with board, washing, &c.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Resident Medical Officer. Salary at rate of £150 per annum, with board and washing.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—Assistant House Surgeon for six months. Salary £20, with lunch and tea.

ST. MARYLEBONE.—District Medical Officer to attend the Poor in St. John's District of the Parish. Salary £100 per annum.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Resident Medical Officer. Salary at rate of £90 per annum, with board, residence, and laundry.

SALFORD ROYAL HOSPITAL.—Resident Surgical Officer and Casualty House Surgeon for six months. Salary at rate of £120 and £100 per annum respectively, with board and residence.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with apartments, board, lodging, and washing.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior and Junior House Surgeons. Salary £100 and £80 per annum respectively, with board, residence, &c.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £80 per annum, with board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—House Surgeon and Assistant House Physician. Salary £100 per annum, with board and residence.

SIDLAW SANATORIUM.—Resident Medical Officer. Salary £125 per annum.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary at rate of £120 per annum, with rooms, board, and washing.

SOUTH SHIELDS, INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Junior House Surgeon. Salary £115 per annum, with residence, board, and washing.

SOUTH SHIELDS UNION, HARTON POOR-LAW INSTITUTION.—Assistant Medical Officer. Salary £200 per annum.

STIRLING DISTRICT ASYLUM, Larbert, N.B.—Female Third Assistant Medical Officer. Salary £140 per annum, with board, &c.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £120 per annum, with board, lodging, and washing.

TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £150 per annum, with rooms, board, and washing.

TUNBRIDGE WELLS GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, &c.

WAKEFIELD, CLAYTON HOSPITAL.—Senior House Surgeon. Salary £160 per annum, with board, lodging, and laundry.

WAKEFIELD, WEST RIDING ASYLUM.—Assistant Medical Officer. Salary £250 per annum, with apartments, board, washing, and attendance. Also Locum Tenens Assistant Medical Officer. Salary as arranged, with apartments, board, &c.

WALSALL AND DISTRICT HOSPITAL.—Junior House Surgeon and Anæsthetist. Salary £110 per annum, with board, residence, and laundry.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Locum Tenens Medical Officer, unmarried. Salary 6 guineas per week, with apartments, board, attendance, and washing.

WEST BROMWICH AND DISTRICT HOSPITAL.—House Surgeon and Assistant House Surgeon, unmarried. Salary £150 and £120 per annum respectively, with residence, board, and laundry.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck-street, W.—Resident House Physician for six months. Salary at rate of £100 per annum.

WEST HAM AND EASTERN GENERAL HOSPITAL, Stratford, E.—Junior House Surgeon. Salary at rate of £100 per annum, with board, residence, and washing.

WEST RIDING OF YORKSHIRE, CARDIGAN SANATORIUM, near Wakefield.—Assistant Medical Officer. Salary £250 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary at rate of £125 per annum, with board, rooms, and laundry.

WORCESTER GENERAL INFIRMARY.—Resident Medical Officer. Salary £150 per annum, with board, residence, and washing.

WORKSOP VICTORIA HOSPITAL AND DISPENSARY.—Medical Officer and House Surgeon. Salary £150 per annum, with rooms, coal, light, and attendance.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Barnard Castle, in the county of Durham.

Births, Marriages, and Deaths.

BIRTHS.

BENETT.—On Dec. 30th, 1914, at Trelaske, Dallington, Northampton, Maude Elizabeth, the wife of Captain A. M. Benett, R.A.M.C., of a son.

COOKE.—On Dec. 31st, 1914, at Berkshire Villa, Ventnor, the wife of Reginald T. Cooke, M.R.C.S. Eng., L.R.C.P. Lond., of a son.

EMRYS-ROBERTS.—On Dec. 30th, 1914, at Romarys Radyr, Glamorgan, the wife of Professor Emrys-Roberts, M.D., of a son.

GAUNTLETT.—On Dec. 27th, 1914, at Oakhill-road, Putney, S.W., the wife of Lieutenant H. Leon Gauntlett, R.A.M.C., 6th Gloucester Regiment, of a son.

HOWITT.—On Jan. 2nd, at Chesham-street, Belgrave-square, S.W., the wife of A. B. Howitt, M.D., of a daughter.

MANNERS-RIDGE.—On Dec. 24th, 1914, at New River House, Enfield, Middlesex, the wife of the late Edwyn Manners-Ridge, F.R.C.S. Eng., Lieut. R.N.V.R. Lond., of a son.

MARRIAGES.

LATHBURY—BURTON.—On Dec. 30th, 1914, very quietly, at St. Andrew's, Eastbourne, Arthur E. A. Lathbury, M.R.C.S., L.R.C.P., to Lucy Burton, fourth daughter of the late John Burton, of Beckenham.

PEDLER—RIDEAL.—On Jan. 2nd, at All Saints Church, Finchley-road, by the Rev. J. W. Mills, assistant priest, George Henry Pedler, of 235, Knightsbridge, to Mary Alice, widow of Arthur W. Rideal, of 54, Finchley-road. At home, Knightsbridge Hotel, Feb. 2nd and 4th, from 3.30 to 6 P.M.

DEATHS.

HEDDY.—On Dec. 31st, 1914, at 29, Warwick-road, Ealing, W., Laura Mary, the dearly loved wife of Wm. Jackson Heddy, M.R.C.S. Eng., late of 46, Redcliffe-gardens, S.W.

KENNEDY.—On Dec. 28th, 1914, at Brigstock-road, Thornton Heath, James Price Kennedy, M.B., Ch.B.

LAING.—On Dec. 25th, 1914, suddenly, of heart failure, Ernest Alexander Ronald Laing, M.R.C.S., L.R.C.P., &c., aged 42 years.

LOCKERBIE.—On Jan. 3rd, at Nurse Porter's Nursing Home, Carlisle, William Lockerbie, M.B., Ch.B., of Annan, aged 37 years.

VAWDREY.—On Jan. 1st, at Plymouth, George Vawdrey, M.R.C.S., L.R.C.P., aged 67 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

EDINBURGH UNIVERSITY AND THE WAR.

A VERY interesting souvenir has been issued by the University of Edinburgh. It consists of the University's "Roll of Honour," in the form of a booklet containing the names of 16 members of the University who have died "pro patriâ," of 14 wounded, and of 2 prisoners, together with upwards of 1600 names of teaching staff, clerical staff, technical assistants, servants, and others, graduates and alumni, and present students, now serving their country in various arms and ranks. The total number on the roll at present is 1679, but the list is admittedly incomplete. The medical profession is naturally well represented. In the navy the University provides 85 commissioned officers, of whom four have lost their lives in action, while in the army there are 517 officers, 108 serving in the ranks, and 66 auxiliaries. "Our Lord Rector" (F.M. Lord Kitchener) forms an appropriate frontispiece.

THE PROBLEM OF SERVICE.

To the Editor of THE LANCET.

SIR,—How can the ordinary middle-aged medical practitioner be of use to his country in the present crisis? If he is willing to give up his practice, would he be acceptable for the R.A.M.C. if aged between 40 and 50; and if so, in what capacity or rank? Are commissions granted for special purposes—e.g., medical officer to hospital, recruiting, &c.—which do not involve leaving home?

I venture to think that some authoritative statement on the whole subject would be welcome to many of us who are anxious to offer such services as we may be capable of.

I am, Sir, yours faithfully,

Jan. 1st, 1915. BARKIS.

*** The above is typical of a great many letters which we have received from readers during the past few months. The answer must depend on individual circumstances. A medical man of 40 who is strong and active and is not in regular practice might well apply for a commission in the Territorial Medical Service, in which there are still a number of vacancies for medical officers to reserve units. As stated in our last issue, the War Office is introducing greater flexibility into this branch of service, which should render it more attractive to medical men who wish to serve their country but are prevented from giving entirely unconditional offers of service.—ED. L.

MEDICAL NOTES IN HISTORICAL MANUSCRIPTS.

(*Continued from p. 56.*)

OUR readers were introduced last week to an interesting series of excerpts possessing a medical bearing and taken from family documents relating to the Harley family, which are now preserved at Welbeck Abbey. These excerpts covered a period of some 40 years, commencing from 1633. The series is now extended for a further half century—namely, to 1725.

Dr. J. Covell to Peter Dent.—"Constantinople, April 4, 1684.—Here hath been all this summer as hot a plague as hath happened in the memory of man. About the middle of August there dyed fifteen hundred a weeke and upwards, of all sorts, Turks, Jews, and Christians. I went abroad dayly yet durst not venture to see any gardens either at Strombol or Scutary. All our nation held very well. For my own part I took nothing but a good draught of wormwood-wine in the morning, and chewed zeduary as I walked abroad, and every afternoon punch—a liquor well known to seamen—was all our drink, whereof we took a good dose; and amongst other nations—whereof all had some dyed—it is certain that they that drunk hardest escaped best. I was not att all afraid, yet I have been in danger a thousand times, sometimes very desperately. One could not pass from our house to Galata without meeting the dead carryed out. Most that died were poor people whose diet all summer is most upon cowcumbers, corpooses—which are a sort of water-melon gourd—and such kind of trash, and they dyed like rotten sheep, not one in ten that were smitten escapt. ..... What you commonly talk in England of the Turks not shunning the plague I will assure you is true only in the mean people, which is the same among both Jews, Greeks, and Armenians. They value it not half so much as we do the smal-pox in England, never shun one another's company, only when they die very fast the corps is not accompanied with any or very few besides the priest, sometimes not with him. If a great man dies there is as great a funeral

pomp as if there was no more danger than in an ague; that is the truth; if in a dead man there can be danger, I thinke there is least in a dead Turk, especially a rich man then in any other, for they wash the body, though never so poor—and then with rowlers of wood squeeze out all the excrements they can; then after it is cleansed they stop all the passages with cotton. I always counted the cloaths more infectious than anything. The sick Turks this time fled into country houses and up the Bosphorous, and by their means the plague was scattered almost everywhere for 10 or 12 miles round. ..... We have an English apothecary here who went about dayly. At last it fell in his house, and seized his wife's sister, too far for remedies to take place. She dyed, but his wife and several others escaped by your incomparable *bezoarticum animale*, whereof I have now had good tryal. There was a little boy belonged to one of my Lord's servants formerly; the father came to me for something for it, telling it had convulsion fitts. I asked him if it were not *morjack*—for so the Turks call the plague. He assured me no, no, but the next morning the boy was dead. He himself soon sickened; with a dose of your *bezoarticum animale* and a saffron water which I made here he recovered, and his wife likewise. In August he was smitten again—a thing I think very rare. He sought no more to me but dyed. Feare is a horrid companion in time of pestilence; I thank God I had banished that. ..... Your Jews all, and poor Turkes, Greeks and Armenians, live so abominably nastily and in such narrow filthy streets and so many clustered together that it is a marvel to me that the plague should ever cease untill it had swept them all away; yet it is now quite over and the streets so full of people as none seem to be wanting. ..... I suppose you have heard of their eating of opium. It is very true, and I assure you moreover I know one whom I have seen take the quantity of a hazel nut at a time, and he tells me he cannot live without doing it at least three or four times a day; and I have seen an Arab, that is a messenger sometimes between Aleppo and this place, take above a dram at one time by weight. It presently gives them *keif*, makes them exceeding pleasant, but an houre or two after they are as dull as logs, yet I do not find in them any remarkable drowsiness at all. Many that are used to it, in their *romazan*—their fast—when it is death if it be known that anyone eats the least thing imaginable from sunrise to sunset, the forbearance of this, their *keif*, destroys them."

Abigail Harley to her Father, Sir E. Harley, at Brampton.—"London, June 25, 1687.—My aunt Bromfield has spoken to Dr. Windebank concerning my mother drinking waters and his opinion is that all waters are very improper for a cancerous tumour. He says Hoxton waters would be least prejudicial, as there is nothing of alum or steel in them, but advises to meddle with none."

Edward Harley to Lady Harley.—London, July 7, 1688, a letter enclosing the following prescription for a water for an ulcerated cancer for his mother's use: "Scrape lead very thin with a knife, boyle it wel in good spring water, and with it frequently wash the sore. Let it be fresh lead every time you make it: the same will not serve."

Edward Harley to Sir Edward Harley.—"Aug. 7, 1688.—Mr. Fisher has told me of a spring upon Malvern Hills that had cured some years since a cancer in a lady's breast, who came from London to use it. Since then it has grown famous for curing sores by bathing them there."

Sir E. Harley to Robert Harley, at Brampton.—"1689, Aug. 10.—Mr. Geldsthorp sends in a box camomile flower, lime tree flower, and black cherry water for the child, to be mixed or taken singly, to remedy wind."

Robert Harley to Sir E. Harley.—"1694, Dec. 3.—My wife has sent some of the Countess of Kent's powder of her own making. If it be thought fit for my brother to take he may take as much as will lie upon a sixpence at any time of the day. The ingredients are Contrayaria Bizoar, crab's claws, viper's-skin jelly, &c."

The Same to the Same.—"1694, Dec. 27. My Aunt Foley sayth she experiences a chain of gold about the neck is good to keep the throat clear."

Henry Guy to Robert Harley.—"1695, January.—Though I have the greatest mind in the world to come to see Mr. Harley—for I have had the small-pox and therefore cannot fear them—yet he is not so farre advanced in his recovery as to warrant him for much talking, for which cause I presume to give you the trouble of telling you the discourse which I have heard both learned and experienced persons make concerning the methods to be used at the departure of this disease. Some say that letting blood againe is good, but all agree that there must bee very often purging, for the infirmity which our King labours under came purely from not purging enough after it. They likewise say that after sufficient purging it is absolutely necessary, when he is in the country, to go into asses milke for six weeks, or some such rule, to rectify the whole figure of his blood which this distemper had corrupted."

Henry Guy to Sir E. Harley.—"1698, Sept. 20, London.—I am infinitely concerned at the unfortunate accident which has happened to your son, and the more because there were so many hours between his fall and the letting of blood, the only remedy for such a mischance, and which must be repeated to prevent fully any future ill in the head."

The Same to the Same.—"1698, Oct. 4, London.—Your letter gave me much ease of mind concerning your son, though I confess I do not like the bad blood appearing at the second bleeding. It plainly shows that there is bad blood to be fetched away. The head has suffered most in this accident, and the physicians say that the letting blood in the foot has the best effect on the head, and so likewise has cupping on the shoulders or back; but for the prevention of any future consequence nothing is so good as two issues in the shoulders just by the neck. This draws away all bad humours from the head and is a sure remedy against apoplexy, epilepsy, and many of those diseases."

Robert Harley to Sir E. Harley.—"1700, July 25.—I am extremely sorry to hear of your indisposition. I mentioned the doctor being against your bleeding, but he says you would find relief by blisters upon your arms, on the inside about the binding. I have now one on each arm from which I have found great relief."

The Same to the Same.—"1700, July 27.—Dr. Radcliffe desires you will not do anything more to your knees and legs than keep them warm. Blisters on your arms will relieve your breast. For the cough, besides the use of such things as conserve of roses, he commends the frequent use of ground ivy leaves made and drunk as tea, sweetened with sugar candy, as also the swallowing a clove of garlic often over night to preserve the stomach against goutish humours."

Dr. William Stratford, of Christ Church, Oxford, to Edward (afterwards Lord) Harley.—"1724, Oct. 14.—Yesterday I had the honour to hear from my Lady Oxford, with an account of her having been confined for a week to her chamber, and that she was going to Lady Paulet. Her Ladyship mentions not to me what her illness was, but if it was the cholic I am certain there is no other safe certain remedy for it but the Bath waters. Radcliffe [Dr. John], who would allow the Bath good for nothing else, owned it was a specific for the cholic."

The Same to the Same.—"1725, Oct. 21.—I hope the little one will have no gripes that are dangerous. I would only hint that our friend Radcliffe was for giving young babes as little as possible. He frankly owned he knew not what to do with them, and was for leaving Nature, if it were possible, to do its own work."

"QUI ME ALIT ME EXSTINGUIT."

To the Editor of THE LANCET.

SIR,—The war is compelling us to manufacture our own drugs for ourselves. It may perhaps teach us to rely a little more on our native abilities and output in medical science. The British student, isolated from the Austro-German schools, may at last be induced in greater numbers to employ his own faculties in original research, instead of quoting foreign authorities and humbly swallowing the schematic dubieties of Frankfort and Vienna. The notion that these schools are better than our own is certainly fostered by the self-satisfaction of the Germanic brain, which noises abroad its own contributions to science, while ignoring or belittling those of Britain and France. Yet the young graduate will be no worse off by remaining in London or Edinburgh and learning to respect his own nation, not as such, but for the sheer weight and splendour of its scientific achievements. He should then acquire self-trust and the power to think and work independently. And for encouragement let him invoke such august shades as those of Newton and Faraday, of Harvey and Hunter, of Syme, Young, Graves, Lister, and Darwin.

I am, Sir, yours faithfully,

Liverpool. EDMUND HUGHES.

THE ROYAL NAVAL DIVISION.

WE have been asked by Lieutenant D. Bywater, R.N.V.R., Acting Adjutant of the Royal Naval Division Public School Battalion, to draw the attention of our readers to this battalion, which is being raised from among public school and university men between the ages of 18 and 35 for service during the period of the war. The strength of the corps will be 1000, and it is strictly limited to men who are included in the above definition. Medical men and medical students, in view of the special need for their present and future professional services, are very wisely discouraged by the military authorities from serving as combatants; but they can use their influence with others of their own class who are eligible to join such a *corps d'élite* as this Public School Battalion. Applications should be made to the Royal Naval Division, 6, 7, and 8, Old Bond-street, London, W.

EMERGENCY CLEANING OF INSTRUMENTS.

To the Editor of THE LANCET.

SIR,—Many years ago I found that the special indiarubber made for the use of typists, which I believe is a mixture of rubber and emery, was also good for cleaning rust spots off scissors, knives, and so forth, and also certain metal parts of the typewriter itself, and I have many times recommended its use, especially in emergency. Now and again I see it recommended in popular journals. The emery, or whatever it is, is in such a fine state of division that while it cleans well it does not scratch the instrument. I had occasion once to recommend it to a surgeon who was going to perform some minor operation, and he was well pleased with it and said that it was a new notion to him.

I am, Sir, yours faithfully,

London, January, 1915. TYPIST.

THE BRINE BATHS OF BIARRITZ.

IN addition to its climatic advantages Biarritz possesses brine springs, and there is a well-appointed saline bath establishment situated about 500 yards from the seashore on the road to Bayonne, in the centre of well laid out gardens. Every facility is given for treatment, which consists of baths, douches or shower baths, local applications in the form of compresses and irrigations, and massage under water. The waters are very strong and contain 307 grammes of salts (chiefly sodium chloride) per litre, or about 11 times the saline strength of sea water. The springs occur at Briscous, a few miles distant, whence it is conveyed to the elegant thermal establishment through pipes, the supply equalling 2000 gallons per 24 hours if required. The cases which receive benefit are chiefly those in anæmia, however caused, and so forth. The surroundings are attractive and the climate is described as, at the same time, bracing and sedative.

THE BRITISH PHARMACOPŒIA, 1914.

SOME of the wholesale drug houses have issued "Notes" on the new Pharmacopœia. Messrs. C. J. Hewlett and Son, Limited, 35 to 42, Charlotte-street, London, E.C., intimate that they will be glad to send a copy of their useful leaflet on this subject post-free to any medical man on request. It deals in a concise way with the additions, the notable omissions, and the principal alterations.

H. R. and A. H.—Something must be allowed for the general circumstances of the war, which, also, specially affected the publication in the direction complained of. The publishers have announced their intention of returning to the previous shape. The publication of an appendix would be a very expensive proceeding indeed.

Miss E. Piggott.—We cannot trace the quotation and there is no reference to the matter in our Analytical Records.

H. L. Morris and C. H. W.—See page 46 of our last issue.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

THURSDAY.

SECTION OF BALNEOLOGY AND CLIMATOLOGY (Hon. Secretaries—Chas. W. Buckley, J. Campbell McClure): at 5.30 P.M.

Discussion:

The Value of Military Medical Baths (opened by Dr. Fortescue Fox).

N.B.—Members of the MEDICAL and SURGICAL SECTIONS are specially invited to attend and take part in the discussion.

FRIDAY.

SECTION OF ELECTRO-THERAPEUTICS (Hon. Secretaries—S. Gilbert Scott, E. P. Cumberbatch): at 8.30 P.M.

Paper:

The Effect of Modern Projectiles on Tissues as Demonstrated by X Rays. Lantern slides and skiagrams will be shown.

Discussion:

(1) Methods for Localisation of Foreign Bodies; (2) The Treatment of Shell Wounds, &c., by Ionisation.

Members wishing to take part kindly send in their names to Mr. S. Gilbert Scott, 6, Bentinck-street, W., as soon as possible. Skiagrams for exhibition to be sent in the day before the meeting.

HUNTERIAN SOCIETY, Barbers' Hall, Monkwell-street, E.C.

WEDNESDAY.—8.30 P.M., Council Meeting. 9 P.M., Hunterian Society Lecture:—Mr. D. J. Armour: Surgical Experiences during the Present War.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, Society's Rooms, West London Hospital, Hammersmith-road, W.

FRIDAY.—8 P.M., Cases of Wounds caused in the War will be shown. The following have promised to assist with Cases, X Rays, &c.:—Colonel Peterkin, Lieutenant-Colonel O. Robinson, Mr. A. Baldwin, Mr. McAdam Eccles, Mr. C. C. Choyce, Mr. T. Gray.

SOUTH-WEST LONDON MEDICAL SOCIETY, Bolingbroke Hospital, Wandsworth Common, S.W.

WEDNESDAY—9 P.M, Mr. K. Goadby: Diseases of the Gums as they Affect the General Practitioner. (Lantern demonstration.)

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.

FRIDAY.—8.30 P.M., Discussion on Bacillary Dysentery (opened by Dr. H. S. Gettings).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. D. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. Mr. B. Harman and Mr. Gibb: Eye Department.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. Dr. Owen: Demonstration of Cases in Wards. 12 noon, Mr. T. Gray: Demonstration of Fractures, &c. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 11 A.M., Mr. Souttar: Demonstration of Minor Operations. 12 noon, Lecture:—Mr. Souttar: Abdominal Diagnosis. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Dr. Simson: Diseases of Women. Mr. Gibb: Diseases of the Eye.

THURSDAY.—9 A.M., Dr. Bernstein: Bacterial Therapy Department. 10.30 A.M., Dr. Simson: Gynæcological Demonstration. 12 noon, Lecture:—Dr. G. Stewart: Neurological Cases. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. D. Armour: Operations. Mr. B. Harman: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture:—Dr. Bernstein: Applied Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Eye Operations. 12 noon, Lecture:—Mr. Souttar: Surgical Anatomy of the Abdomen. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY AND FRIDAY.—3 P.M., Lecture:—Dr. A. Wylie: Diseases of the Larynx.

THE THROAT HOSPITAL, Golden-square, W.

MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Dr. W. K. Sibley: Lupus Vulgaris and Erythematosus.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Tuberculosis of the Skin and Lupus Erythematosus.

CHADWICK PUBLIC LECTURES, Lecture Hall, Royal Society of Arts, John-street, Adelphi, W.C.

FRIDAY.—5.15 P.M., Dr. F. M. Sandwith: War and Disease—I., Continental Wars of the Nineteenth Century.

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."
Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*
We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1914 were given in THE LANCET of Dec. 26th, 1914.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1914 will be ready shortly. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

Cases for binding the half year's numbers are now ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will ensure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

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The rates of subscriptions, post free from THE LANCET Offices, have been reduced, and are now as follows:—

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TO COLONIAL AND FOREIGN SUBSCRIBERS.

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SOLE AGENTS FOR AMERICA—MESSRS. WILLIAM WOOD AND CO., 51, Fifth Avenue, New York, U.S.A.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 6th, 1915.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Dec. 31	29·	S.W.	1·05	52	45	38	42	42	
Jan. 1	29·160	S.	0·35	50	46	38	38	40	Cloudy
,, 2	26·840	S.W.	0·23	63	47	40	41	42	Cloudy
,, 3	28·820	S.E.	0·49	48	44	39	39	41	Raining
,, 4	29·020	W.	0·05	45	44	35	36	36	Sleet
,, 5	29·606	S.W.	0·05	52	47	36	38	38	Foggy
,, 6	29·850	S.W.	...	58	49	38	42	43	Cloudy

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